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**Date** February 23, 2023 **Report No.** 2023-206  
**To** Chair and Members  
Vision Zero Road Safety Committee  
**From** Inderjit Hans, P. Eng., PMP  
General Manager, Public Works Commission

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### 1.0 Type of Report

Consent Item   
Item For Consideration

### 2.0 Topic **2021 Collision Statistics [Financial Impact-None]**

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### 3.0 Recommendation

That Report 2023-206 regarding “2021 Collision Statistics”, BE RECEIVED.

### 4.0 Background

At its meeting held April 27, 2021, City Council approved report no. 2021-275 City of Brantford Vision Zero Road Safety Plan. The plan aims to address a number of goals and priorities for the City, including promoting safe, healthy, and age-friendly built environments; ensuring all neighbourhoods in the City are safe, vibrant, attractive, and inclusive; and promoting a safe and efficient transportation system that connects Brantford neighbourhoods and neighbouring communities.

Since April 27, 2021, staff have undertaken several initiatives towards the success of the plan. The initiatives include but are not limited to:

- Pedestrian Countdown Signals
- Audible Push Buttons for Pedestrians

- Designated on and off road cycling facilities
- Traffic Calming and Neighbourhood Traffic Management Assessments
- Red Light Camera program
- Community Safety Zones

The plan focused on achieving the following four goals by 2026:

1. Establish an understanding of the costs associated with road collisions in the City for the following areas to help evaluate the progress of road safety initiatives.
2. Partner with community organizations to stress the importance of road safety and reinforce that it is a shared responsibility between the City, community partners, and members of the public.
3. Reduce the number of total road collisions on municipal roads by 10% from the 2019 figures by the end of 2026.
4. Reduce the number of fatalities resulting from collisions to ZERO.

This report is a summary of 2021 road collisions and fatalities resulting from collisions for goal 3 and 4 above. A full version of the 2021 Annual Collision Information report is attached as Appendix “A” to this report.

## 5.0 Analysis

The COVID-19 pandemic had a global impact on traffic volumes and patterns, that resulted in a reduction in motor vehicle collisions. However, many municipalities saw an increase in fatal collisions during this period, due to speeding and driving under the influence. Table 1 provides a summary of annual collision frequency occurring 2019 to 2021:

**Table 1 - Collision Frequency (2019-2021)**

Year	Total Collisions	Fatal Collisions	Injury Collisions
2019	1739	4	208
2020	1297	4	140
2021	1293	2	130

2021 General Collision Statistics:

- 1 collision occurred every 7 hours
- 1 person is injured in a collision every 63 hours
- 1 fatal collision occurs every 183 days
- 1 pedestrian is involved in a collision every 13 days
- 1 cyclist is involved in a collision every 20 days

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Goal 3 of the Brantford Vision Zero Road Safety Plan has been broken down in to the first three metrics below. It's important to note, the plan identified 2019 collision statistics as the baseline to gauge the plans success.

1. Reduce the number of total collisions on roadways by 10%
  - In 2019, 1,739 collisions occurred. In 2021 a total of 1,293 collisions occurred. This is a reduction in collisions by 25.6%
2. Reduce the number of collisions involving cyclists and pedestrians by 25%.
  - In 2019, 47 collisions occurred involving pedestrians. In 2021 a total of 29 collision occurred. This is a reduction in collisions by 38.3%
  - In 2019, 33 collisions occurred involving cyclists. In 2021 a total of 18 collisions occurred. This is a reduction in collisions by 45.5%
3. Reduce the number of personal injuries resulting from collisions by 25%.
  - In 2019, 212 collisions occurred that resulted in personal injuries. In 2021 a total of 132 collisions occurred. This is a reduction in collisions by 37.7%.
4. Reduce the number of fatalities resulting from collisions to ZERO.
  - In 2019, 4 collisions occurred that resulted in fatalities. In 2021, a total of 2 collisions occurred. This is a reduction in fatal collisions by 50%.

With the exception of 4 fatalities resulting from collisions, the City has exceeded the targets approved by Council as it relates to total collisions and collisions resulting in injuries. Though collisions have declined, the pandemic has had an impact on overall traffic patterns and it will be important to continue to monitor conditions over the next several years.

The contributing factors to the majority of collisions are a result of distracted driving (31.3%) and speeding (19.3%).

Top 5 Intersections with the Highest Frequency of Fatal and Injury Collisions, 5 year Average (2017-2021).

1. Clarence Street at Dalhousie Street – 22\*
2. Edmondson Street at Wayne Gretzky Parkway – 20
3. Clarence Street at Colborne Street – 17\*
4. Wayne Gretzky Parkway at Henry Street – 16
5. Clarence Street South at Icomm Drive – 13\*

Locations identified with a “\*” are also top locations involving pedestrians. Traffic Services will be proceeding to undertake detailed investigations of

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collisions at these five intersections and identifying opportunities for improvements.


The Collision report also identified the top four locations with the highest frequency of cyclist collisions involving injuries between 2017 and 2021. Of these collisions, three of the four intersections are along Wayne Gretzky Parkway. Traffic Services, through the Active Transportation program, will also be investigating these locations to identify safety improvements.

## 6.0 Financial Implications

There are no financial implications associated with this report.

## 7.0 Conclusion

The City of Brantford has exceeded the targets approved by Council as it relates to total collisions and collisions resulting in injuries. Though collisions have declined, the pandemic has had an impact on overall traffic patterns and it will be important to continue to monitor conditions over the next several years.



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Inderjit Hans, P.Eng., PMP  
General Manager, Public Works Commission

Prepared By:  
David Ferguson, Manager of Traffic Services

Attachments  
Appendix "A" – 2021 Annual Collision Report

In adopting this report, is a by-law or agreement required? If so, it should be referenced in the recommendation section.

By-law required  yes  no

Agreement(s) or other documents to be signed by Mayor and/or City Clerk  yes  no

Is the necessary by-law or agreement being sent concurrently to Council?  yes  no



# ANNUAL COLLISION REPORT

## 2021



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EXPOSITOR BUILDING



DALHOUSIE

QUEEN

The  
Hot  
| coffee donuts

## Executive Summary

This report presents an overview of road safety in the City of Brantford based on the last five years (2017–2021). The analysis was conducted for collisions occurring on the City road network. Ten years of collision data (2012–2021) was used where necessary to provide the bigger picture. The COVID-19 pandemic declared in March 2020 has had an impact on traffic volumes and as such, the 2020 and 2021 collision statistics should be viewed with this in mind. The City should continue monitoring collision statistics in future years to see if the trends continue.

The collision analyses conducted in this study reveal a few emphasis areas for the City to further focus on in order to improve road safety and reach the goals of the Vision Zero plan:

- Single motor vehicle collisions on road sections (46.6% of all collisions on road sections were single motor vehicle collisions);
- Signalized intersections experienced 66.6% of all collisions; also, the majority of pedestrian and cyclist collisions occurred at signalized intersections in Brantford;
- Hot spot locations as identified in this report (high frequency collision location) and other City initiatives to identify hot spots; and
- Distracted driving which was a contributing factors to at least 31.3% of fatal and injury collisions.

Engineering remedial actions (countermeasures) can address the majority of issues contributing to collisions in the emphasis areas. However, road safety is multidisciplinary and requires collaboration of all professionals in the City who play a part in road safety including police, public health, school boards, and all citizens in the City of Brantford.

The highlights of this report are listed below.

### General Collision Trends

The following general collision trends were noted:

- The collision data shows that the total number of collisions has increased since 2015, but has been impacted by the pandemic. The year 2021 had the lowest number of collisions in the past 10 years, with collisions decreasing by 0.31% compared to 2020.
- Total collisions decreased by 25.6% in 2021 compared to pre-pandemic levels (2019), which meets the City's Vision Zero goal. Fatal and injury collisions decreased by 37.7% in 2021 compared to 2019 and by 8.3% compared to 2020. These statistics should be viewed considering the impacts of the COVID-19 pandemic on traffic volumes.
- While the City of Brantford experiences around 1,574 collisions per year on average, there were 1,293 collisions in 2021.
- There were 130 collision-related personal injuries in 2021 compared to 208 collision-related personal injuries in 2019 which is a reduction of 37.5%, exceeding the City's Vision Zero goal. These statistics should be viewed considering the impacts of the COVID-19 pandemic on traffic volumes.
- There were 2 collision-related fatalities in 2021, both of motorcyclists. Collision-related fatalities decreased by 50% in 2021 (2) compared to 2020 (4) and 2019 (4).



- Male drivers were involved in more collisions than female drivers across all age groups. Male drivers constituted 54.6% of all drivers involved in collisions.
- The majority of collisions (71.4%) occurred during dry surface conditions. Collisions occurring during wet and snow/ice covered conditions were 18% and 10.4% respectively. This is consistent with provincial averages.
- The majority of collisions occurred during daylight condition (75.1%). This percentage is similar to provincial averages (approximately 72%).
- On road sections, Single Motor Vehicle (SMV) collisions constituted 46.6% of total collisions, followed by rear-end collisions (17%).
- At signalized intersections, rear-end collisions were the largest type of collisions (39.4%), followed by turning movement (24.5%). This is consistent with other jurisdictions.

## Temporal Trends

The following temporal trends were noted:

- The largest number of collisions occurred during the months of October, November, December, and January.
- The months of September and October experienced the highest numbers of fatal and injury collisions based on 2017–2021 collision data.
- More collisions and most fatal and injury collisions occurred during Fridays and Saturdays compared to any other day of week, which is consistent with Provincial observations.
- During weekdays, there is a strong correlation between the peak periods of traffic and the number of collisions. In Brantford most collisions regardless of their severity occurred in the PM peak of traffic (3:00 PM – 5:00 PM), mid-day peak of traffic (around noon), and AM peak of traffic (8:00 AM – 9:00 AM).
- The pattern of collisions during weekends are different from weekdays. The number of collisions during weekends was much lower than weekdays and the hours with the largest number of collisions were distributed from 9:00 AM to 6:00 PM.

## Spatial Trends

The following spatial trends were noted:

- The intersection of Clarence Street and Dalhousie Street experienced the highest number of fatal and injury collisions from 2017–2021 (22).
- The intersection of Edmondson Street and Wayne Gretzky Parkway experience the second highest number of fatal and injury collisions from 2017–2021 (20).
- The road section of Wayne Gretzky Parkway between Henry Street and Morton Avenue East, experienced the largest number of fatal and injury collisions from 2017–2021 (8).
- 63.4% of all collisions occurred at intersections. Among those, 66.6% occurred at signalized intersections and 20.6% occurred at stop-controlled intersections.

## Vulnerable Road Users

The following trends and observations were noted for pedestrian and cyclist collisions:

- The number of pedestrian collisions has fluctuated between 57 and 29 in the past 5 years. In 2021, the City experienced 29 pedestrian collisions which is 12.2% fewer than in 2020 and 38% fewer than in 2019, exceeding the City's Vision Zero goals. These statistics should be viewed considering the impacts of the COVID-19 pandemic on traffic volumes.
- The number of cyclist collisions has decreased from 43 to 18 in the past 5 years. In 2021, the number of cyclist collisions decreased by 25% compared to 2020 and by 45% compared to 2019, exceeding the City's Vision Zero goals. These statistics should be viewed considering the impacts of the COVID-19 pandemic on traffic volumes.
- The largest number of pedestrian collisions occurred in the month of November, which is consistent with other municipalities in Ontario.
- The largest number of cyclist collisions occurred between the months of June to October.
- The largest number of pedestrian and cyclist collisions occurred on Thursdays.
- 77.9% of all pedestrian collisions resulted in an injury in 2017–2021 while 0.9% resulted in a fatality (there were no pedestrian fatalities in 2021).
- 68.2% of all cyclists involved in a collision sustained injury in 2017–2021 while 0.7% resulted in a fatality (there were no cyclist fatalities in 2021).
- 77.9% of pedestrian collisions occurred at intersections, and among those, 60.4% occurred at signalized intersections.
- 78.8% of cyclist collisions occurred at intersections among those, 59.7% occurred at signalized intersections.
- A review of driver actions involved in pedestrian and cyclist collisions showed that 40.1% and 16.6% of drivers failed to provide the right of way to pedestrians and cyclists respectively. Additionally, drivers disobeyed traffic control in 5.5% of pedestrian collisions and 20.5% of cyclist collisions.
- A review of pedestrian actions in collisions from 2017–2021 showed that pedestrians crossed without the right-of-way in 10.7% of collisions at intersections and in 15.8% of collisions at midblocks.

## Driver Behaviour

The following road user collision trends were noted:

- Distracted driving was a contributing factor to 31.3% of fatal and injury collisions.
- Impairment / alcohol consumption was a contributing factor in 5.8% of fatal and injury collisions.
- Speeding accounted for 19.3% of all police-reported collisions.

## Disclaimer and Explanation

### Self-Reporting of Collisions

The use of the term “reported” or “police reported” collision refers to a collision attended by a member of the Brantford Police Service who filled out the standard Provincial reporting form. The term “self-reported” refers to a collision reported by citizens involved in property damage collisions that do not involve damage to private, municipal, or highway property. Self-reported collisions are filed at Collision Reporting Centres (CRC) based on the information provided by the parties involved in the collision.

In this report, all charts and statistics are based on the total collisions (police reported and self-reported collisions) unless otherwise stated.

### COVID-19 Pandemic and Traffic Patterns

On March 17, 2020, the Government of Ontario declared a state of emergency due to the COVID-19 pandemic and ordered gradual closure of businesses and facilities. As a result of the state of emergency and subsequent stay at home orders from the Province, the City of Brantford, similar to other jurisdictions in Ontario, experienced reduction in vehicular traffic volumes, resulting in a reduction in the number of collisions.

The official Ontario-wide 2021 collision statistics have not yet been released by the Ontario Ministry of Transportation. The Ontario Provincial Police (OPP) have released 2021 statistics for OPP-patrolled roadways. There was a total of 315 fatalities in 288 collisions in Ontario in 2021<sup>1</sup>. Speeding and aggressive driving contributed to 81 fatalities, the highest in the past 10 years. The number of persons killed in alcohol/drug-related collisions was 31, which presented a 46% reduction when compared to 2020.

In 2019, the number of fatal and personal injury collisions in Ontario was 34,130<sup>2</sup>. In 2020, the impact of the COVID-19 pandemic on traffic volumes resulted in a reduction of fatal and injury collisions in Ontario by 30.6%, with numbers down to 23,689<sup>3</sup>.

Although the 2021 collision statistics have not yet been released by the Province of Ontario, based on the observed traffic volumes it is expected that 2021 collisions will be higher than in 2020 but fewer than in 2019.

1 <https://www.bayshorebroadcasting.ca/2022/03/23/142629/>

2 <https://files.ontario.ca/mto-3/mto-preliminary-orsar-2019-en-2021-11-18.pdf>

3 <https://files.ontario.ca/mto-3/mto-preliminary-orsar-2020-en-2021-11-18.pdf>

## Introduction

The City of Brantford is situated in Southwestern Ontario and was founded in 1788 on the banks of the Grand River. Based on the 2021 Census, the population of Brantford was 104,688<sup>4</sup>.

The City road network includes 1,151 kilometers of roads<sup>5</sup> and contains the full spectrum of road types: multi-lane, arterials, residential local and collector streets and medium- and high-speed rural two-lane roads.

The geographic area for analysis in this report includes all roads within the Brantford municipal boundaries, excluding provincially-controlled roadways such as Highway 403, named Alexander Graham Bell Parkway within Brantford's boundaries. Collisions occurring on service roads to Alexander Graham Bell Parkway are included. Only collisions on City streets or sidewalks are recorded; private property collisions are not included.

Road safety is a complex and multidisciplinary subject. In the City of Brantford, many professionals work together to provide a safe transportation system to our residents. These professionals include law enforcement, engineers, planners, public health nurses, student transportation services, transit operators, and educators who work together to provide a safe transportation system to our residents.

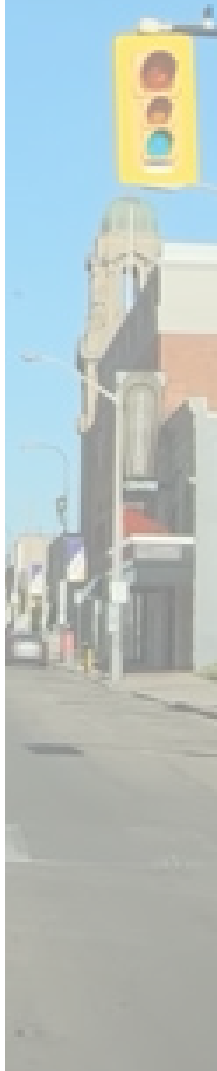
The City of Brantford created its first Transportation Master Plan (TMP) in 2007, which was subsequently updated in 2014 and 2020. The 2020 updated TMP accommodated City growth to 2041. An Addendum to the 2020 TMP was released in September 2021, which provided targeted updates to the 2020 TMP considering City growth to 2051 and other specific objectives such as becoming a bicycle-friendly community, preparing for connected and autonomous vehicles and applying a complete streets philosophy.

The City of Brantford also adopted the Vision Zero road safety initiative in 2018, aiming to make Brantford's street safer through improved education, enforcement, engineering, evaluation, and engagement. The document "Vision Zero: The City of Brantford's Road Safety Plan" outlines the City's road safety goals, and targets reductions by 2026 in total collisions (10%), cycling and pedestrian collisions (25%), and collision-related personal injuries (25%) compared to 2019. Each year the City identifies specific actions that will be undertaken to achieve the Vision Zero goals. The City of Brantford Vision Zero Road Safety Committee meets regularly to coordinate and track the action plans. As detailed in the following sections, Brantford has achieved the targets set out in the 2018 Vision Zero Road Safety Plan.

This Annual Collision Report supports Brantford's TMP and Vision Zero Road Safety Plan by providing insight into the trends, patterns and characteristics of collisions that occurred on the City road system. This report can assist in identifying potential safety issues and mitigative actions to improve safety for road users of all types and ages.

<sup>4</sup> <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?DGUIDlist=2021A00053529006&GENDERlist=1&HEADERlist=0&Lang=E&STATISTIClist=1&SearchText=Brantford>

<sup>5</sup> <https://www.brantford.ca/en/transportation/resources/Documents/Appendix-A-Vision-Zero-The-City-of-Brantfords-Road-Safety-Plan.pdf>





**1 COLLISION**  
every 7 hours



**1 PERSON INJURED**  
every 63 hours



**1 FATALITY**  
every 183 days



**1 PEDESTRIAN COLLISION**  
every 13 days



**1 CYCLIST COLLISION**  
every 20 days

**Brantford's goal is to improve safety for all road users.**

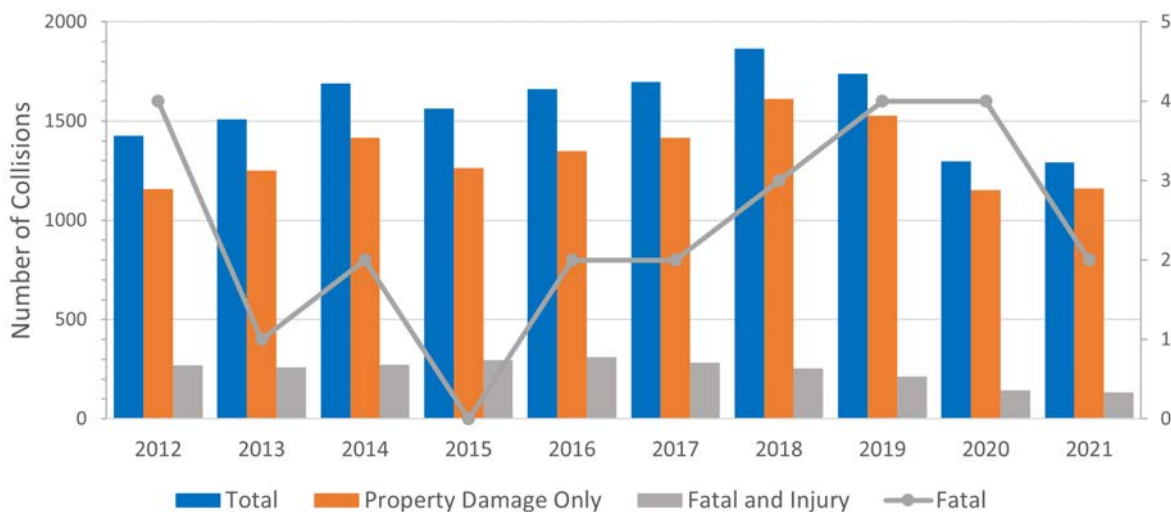
This report provides statistics based on 2017–2021 collision data. Where necessary, statistics for a longer time period were used to identify or visualize patterns and trends.



## Collision Frequency and Severity

A review of the City's collision data shows that the total number of collisions was increasing since 2015, but has been impacted by the COVID-19 Pandemic. Fatal and injury collisions exhibit a downward trend which is consistent with other municipalities in Ontario. Total collisions in 2020 decreased by 25.4% compared to 2019 pre-pandemic levels, which meets the City's Vision Zero goal. The downward trend continued in 2021, with total collisions decreasing by 25.6% compared to 2019 (again meeting the Vision Zero goal) and by 0.31% compared to 2020. Fatal and injury collisions decreased by 32.1% in 2020 and by 37.7% in 2021, when compared to 2019. These statistics should be viewed considering the impacts of the COVID-19 pandemic on traffic volumes.

In 2021, the City experienced 2 fatal collisions, which is a 50% decrease in fatalities compared to 2020, but does not meet the Vision Zero goal of no fatalities from collisions.



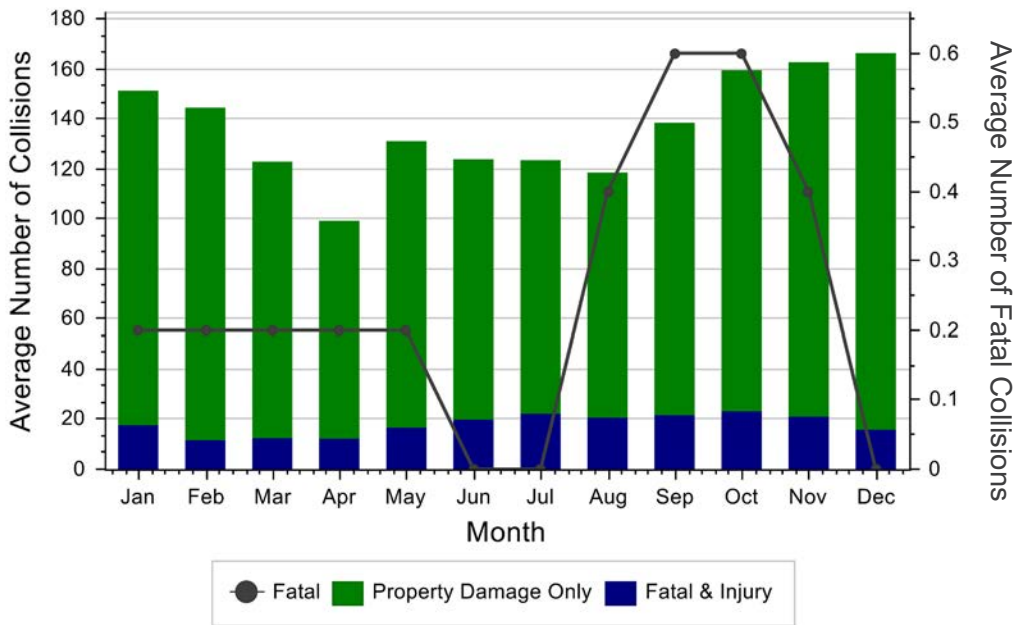
**Collision Frequency (2012–2021)**

Year	Total Collisions	Fatal Collisions	Fatal and Injury Collisions	Property Damage Only Collisions
2012	1,426	4	269	1,157
2013	1,509	1	259	1,250
2014	1,690	2	273	1,417
2015	1,562	0	297	1,265
2016	1,660	2	311	1,349
2017	1,698	2	282	1,416
2018	1,866	3	254	1,612
2019	1,739	4	212	1,527
2020	1,297	4	144	1,153
2021	1,293	2	132	1,161

Collision-related injuries were 130 in 2021, which is a 37.5% reduction from 2019 when there were 208 collision-related injuries. This exceeds the City's Vision Zero goal of a 25% reduction.

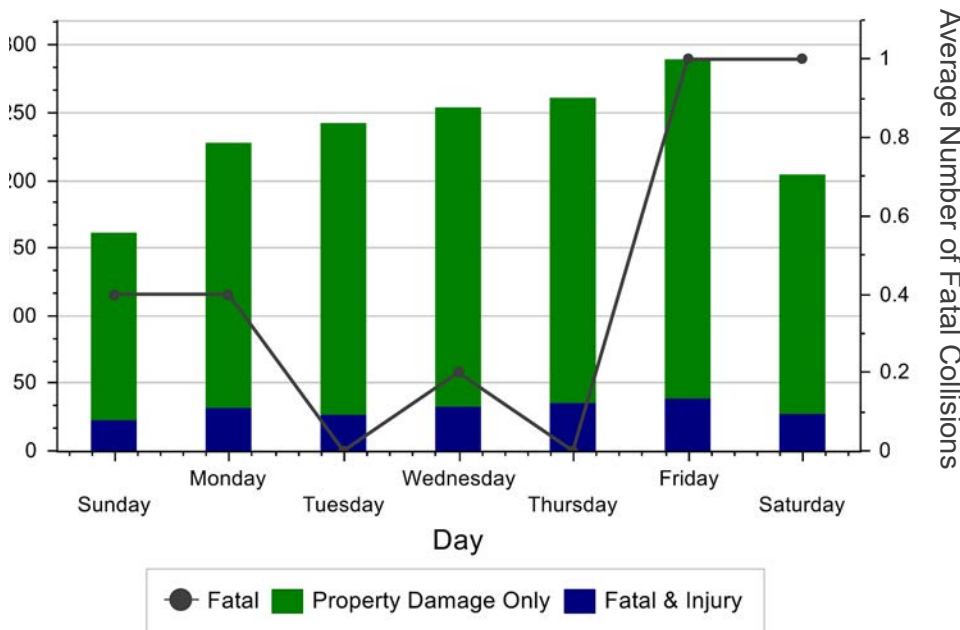
# Month, Day, and Time of Collisions

The largest number of collisions occurred during the months of October, November, December, and January. Of the total collisions from 2017–2021, 39% took place during these four months which is consistent with Provincial averages. The months of September and October experienced the highest numbers of fatal and injury collisions based on 2017–2021 collision data.

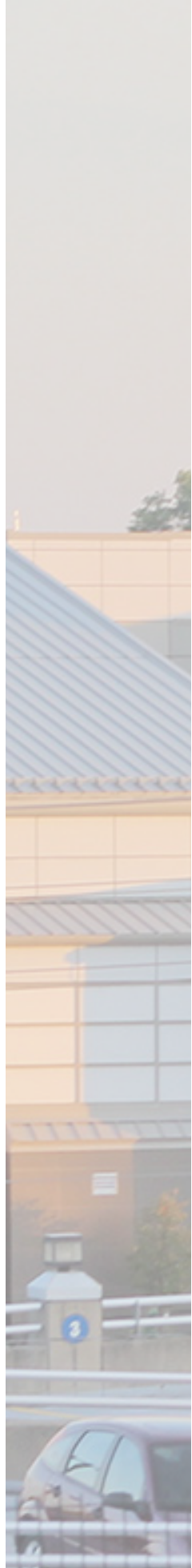


**Collisions by Month, 5 Year Average (2017–2021)**

More collisions and most fatal and injury collisions occurred during Fridays and Saturdays compared to any other day of week, which is similar to Provincial observations.

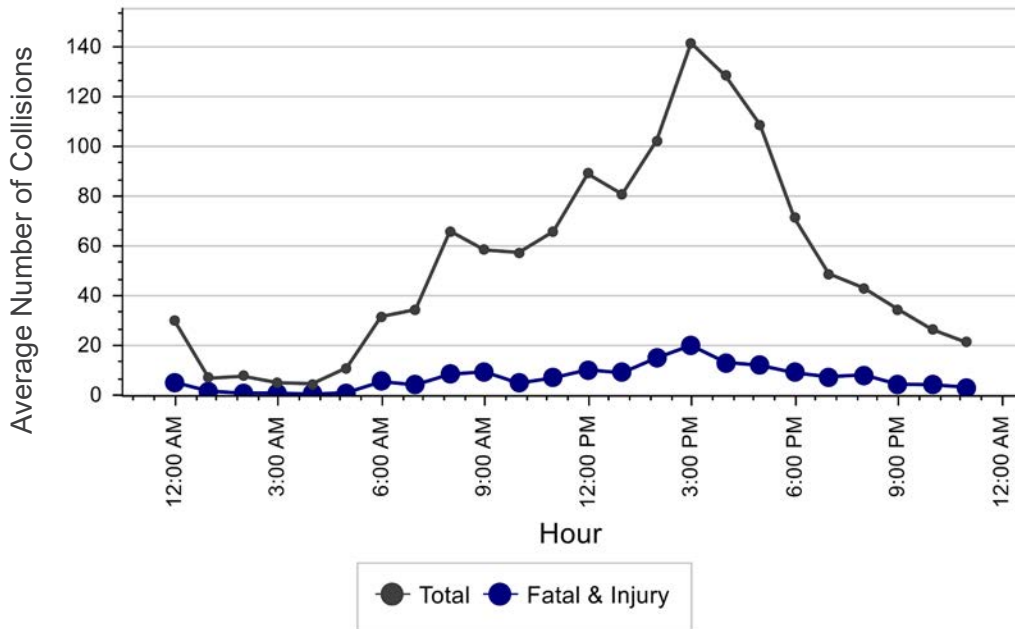


**Collisions by Day of the Week, 5 Year Average (2017–2021)**

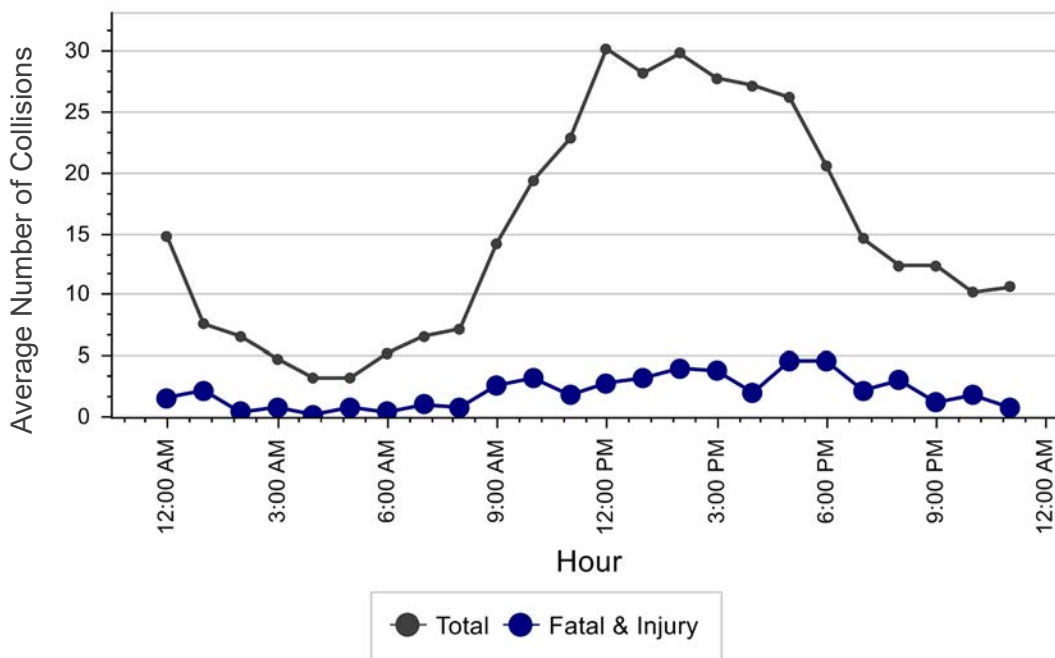


During weekdays, there is a strong correlation between the peak periods of traffic and the number of collisions. Most collisions regardless of their severity occurred in the PM peak of traffic (3:00 PM – 5:00 PM), mid-day peak of traffic (around noon), and AM peak of traffic (8:00 AM – 9:00 AM). The number of collisions during PM peaks are clearly pronounced.

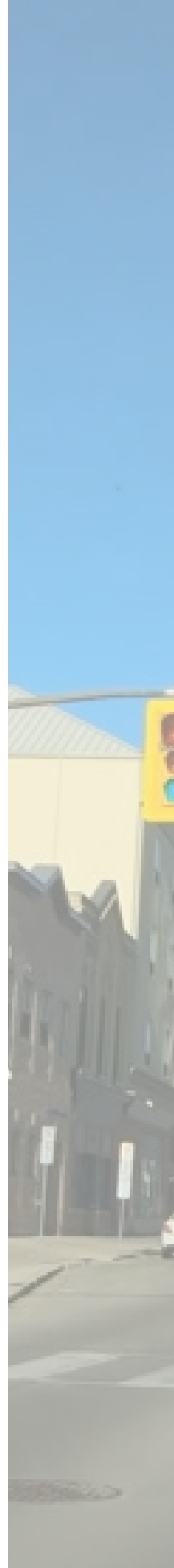
The pattern of collisions during weekends are different from weekdays. The number of collisions during weekends was much lower than weekdays and the hours with the largest number of collisions were spread from 9:00 AM to 7:00 PM. It appears that relatively significant number of collisions occur around midnight in Brantford.



**Weekday Collisions by Time of Day, 5 Year Average (2017–2021)**



**Weekend Collisions by Time of Day, 5 Year Average (2017–2021)**

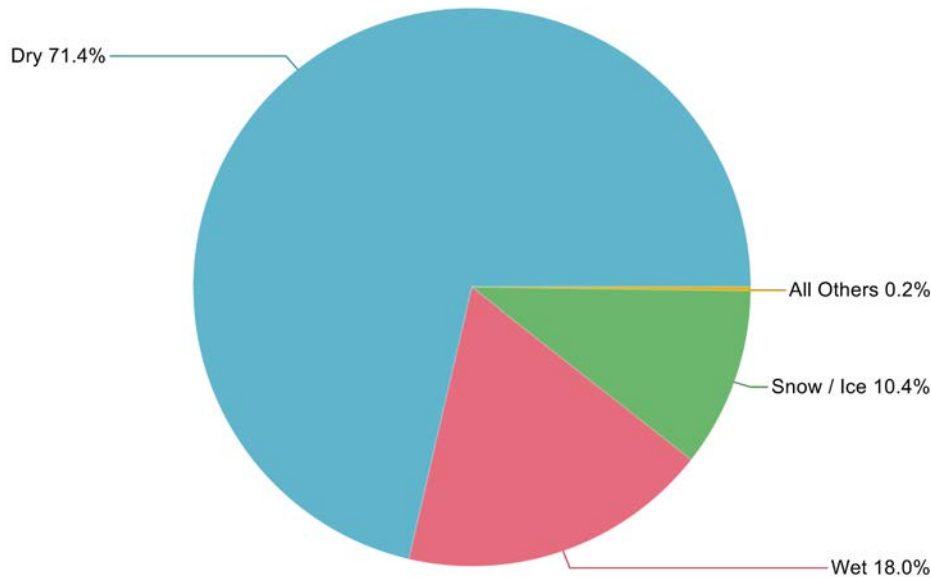




## Collisions By Road Surface and Lighting Conditions

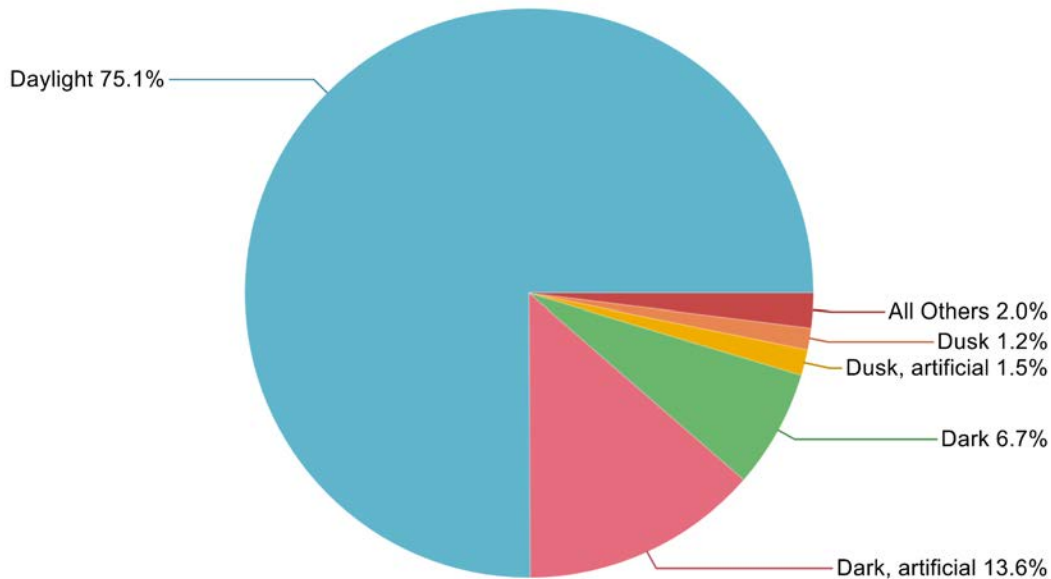
Water, ice, and snow reduce the friction between tires and the road surface. The reduced friction can contribute to collisions. Roads and drainage designed according to standards in conjunction with proper road maintenance ensures that the rain run-off is quickly drained from the road surface.

The majority of collisions (71.4%) occurred on dry surface conditions. Collisions that occurred on wet and snow/ice covered road surfaces were 18% and 10.4% respectively. These percentages are similar to Provincial averages.



### Collisions by Road Surface Condition, 5 Years (2017–2021)

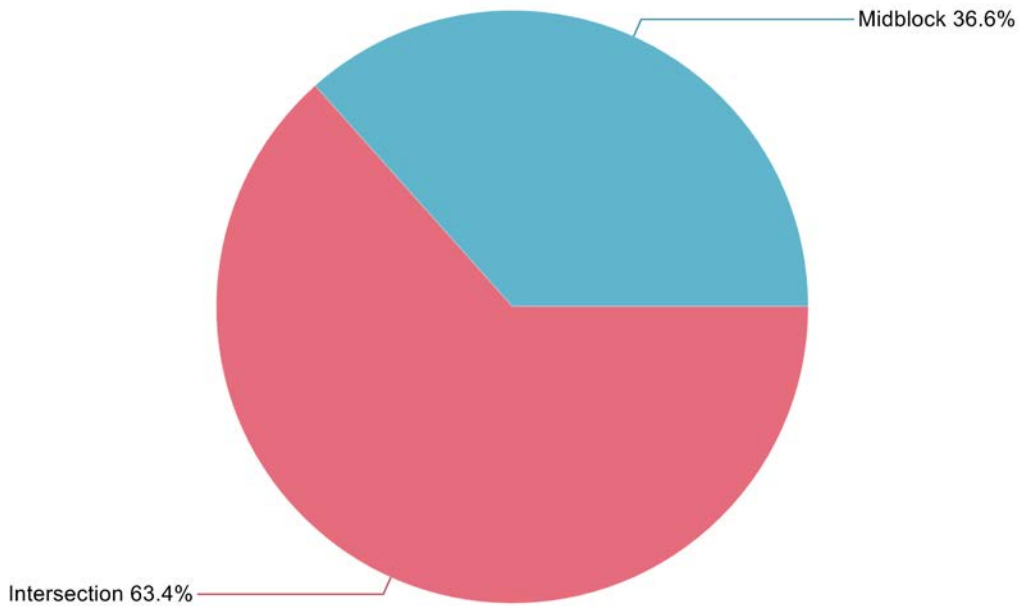
The majority of collisions occurred during daylight conditions (75.1%) in 2017–2021. This is similar to Provincial averages (approximately 72%).



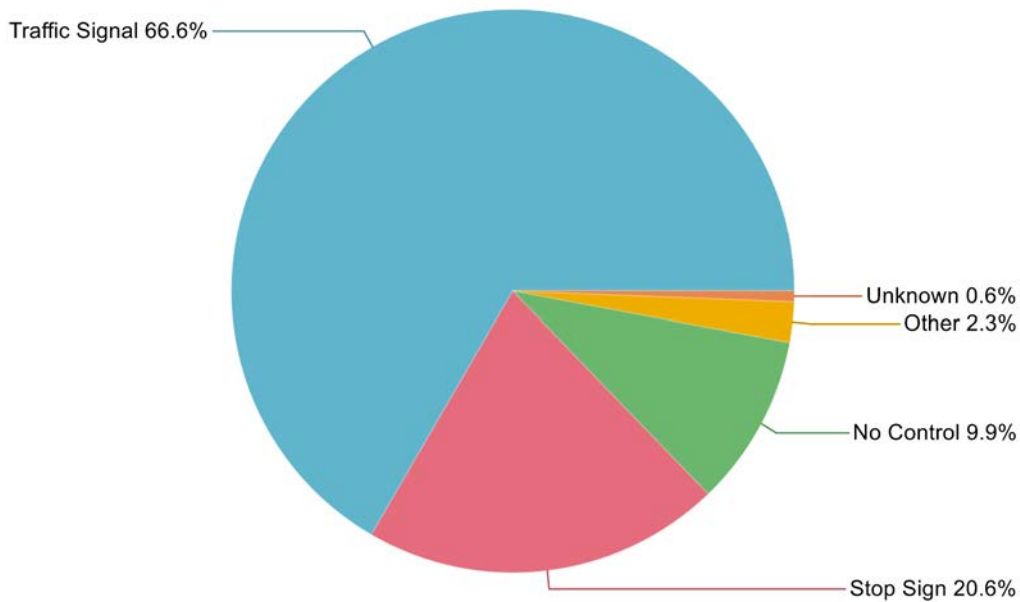
### Collisions by Lighting Condition, 5 Years (2017–2021)

# Collision Impact Type by Site Type and Traffic Control

The majority of collisions during the 2017–2021 period (63.4%) occurred at intersections or were intersection-related. This observation is consistent with other municipalities as intersections are major conflict points in a transportation network. Among those intersection collisions, the majority (66.6%) took place at signalized intersections.

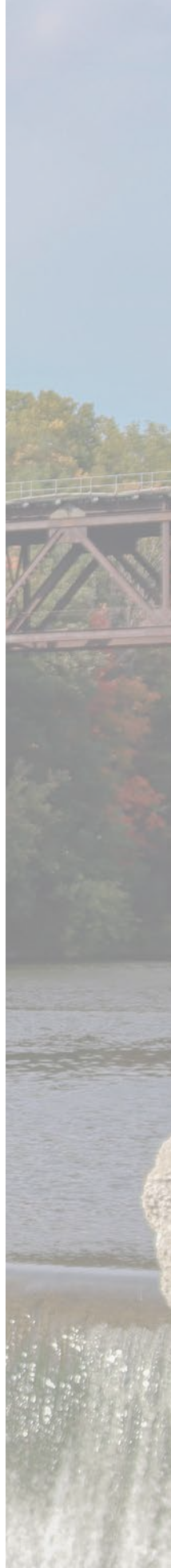


**Collisions by Location, 5 Years (2017–2021)**

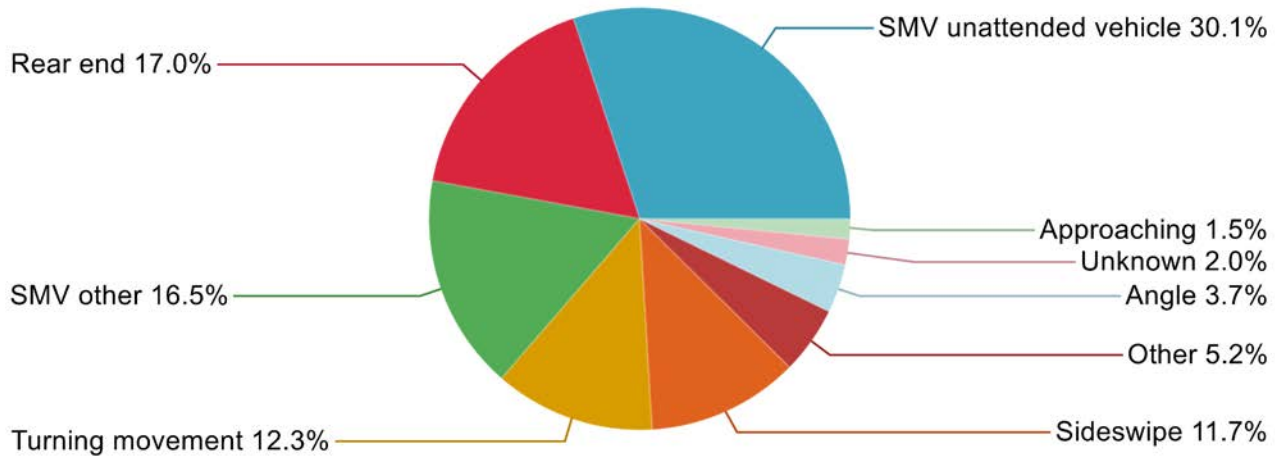


**Intersections Collisions by Traffic Control Type, 5 Years (2017–2021)**

A review of fatal and injury collisions at intersections and midblocks for 2017–2021 shows that both the majority of fatal collisions (60.0%) and injury collisions (73.6%) occurred at intersections.

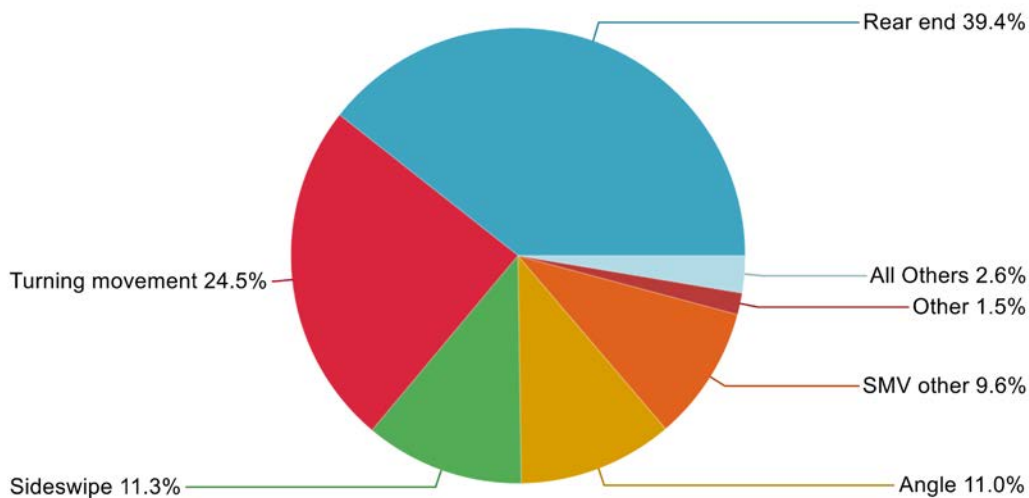


Single Motor Vehicle (SMV) collisions (SMV unattended and SMV other<sup>6</sup>) constituted 46.6% of total collisions on midblocks followed by rear-end collisions (17%).



### Midblock Collisions by Impact Type, 5 Years (2017–2021)

At signalized intersections, the largest collision type is rear-end (39.4%) followed by turning movement (24.5%) and sideswipe (11.3%). These are consistent with other jurisdictions in Ontario.



### Signalized Intersection Collisions by Impact Type, 5 Years (2017–2021)

At stop-controlled intersections, angle collisions were the largest type of collisions (25.3%) followed by turning movement (20.3%).

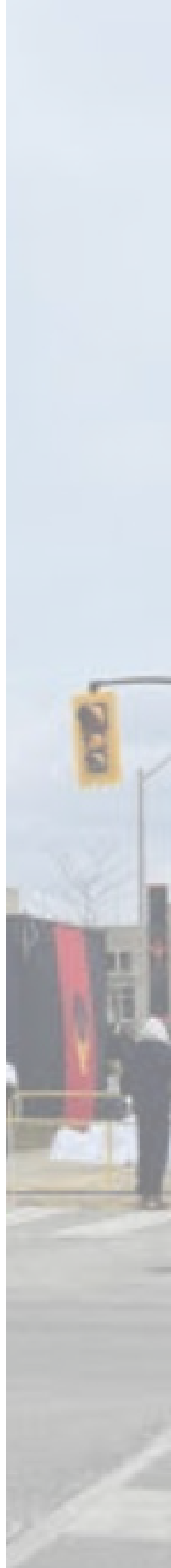
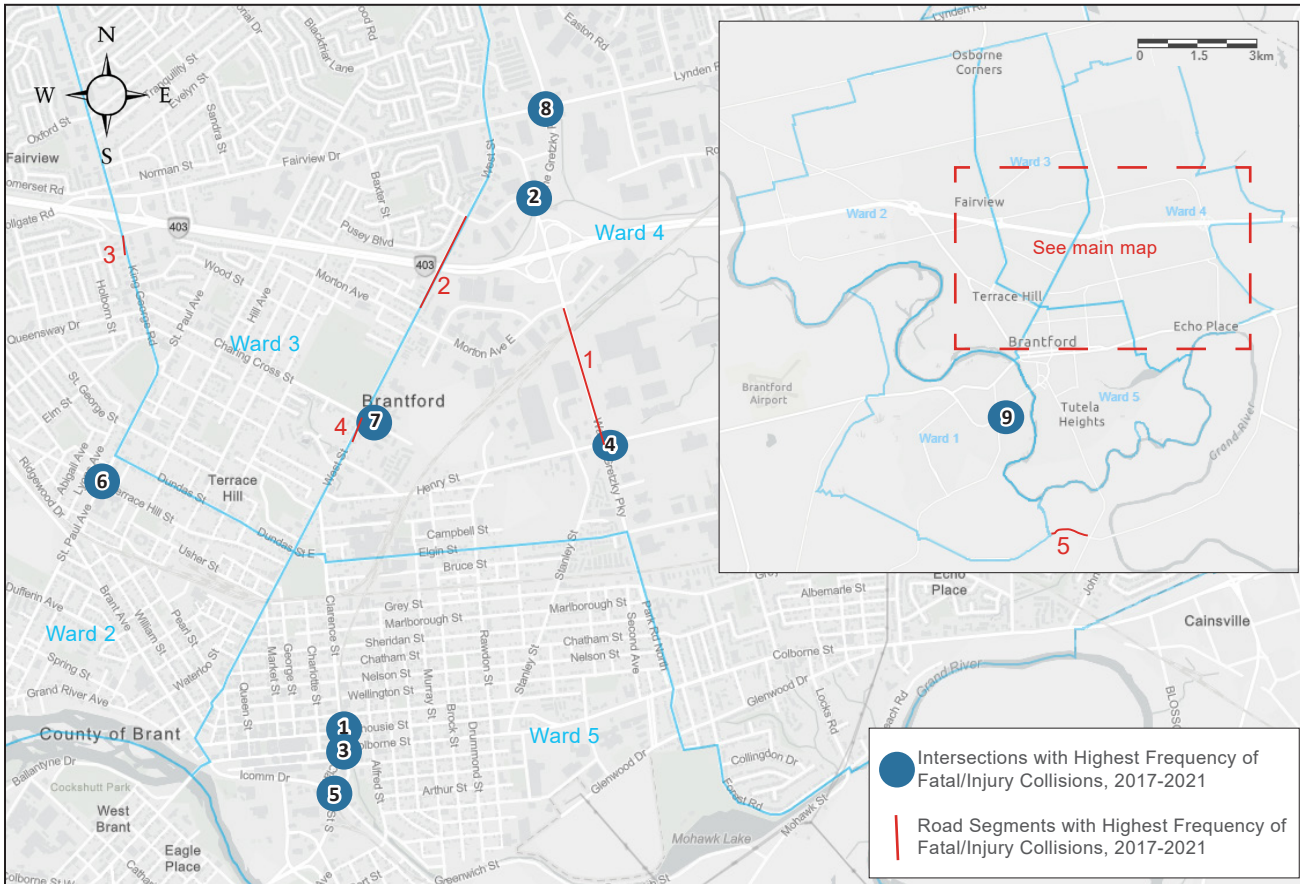
<sup>6</sup> Single motor vehicle (SMV) unattended collisions occur when a vehicle strikes a vehicle unattended by its driver. Include parked, stopped, disabled, abandoned and runaway vehicles, provided it was not under the car and control of a driver. Does not include vehicles stopped for traffic or standing while loading or unloading passengers or cargo. Single motor vehicle (SMV) other refers to collisions where a single motor vehicle initially collides with a fixed object, pedestrian or animal.

# High Frequency Collision Locations

A review of the City's collision data shows that the total number of collisions has been increasing since 2015, until the COVID-19 Pandemic started in 2020. Total collisions in 2020 decreased by 25.4% compared to 2019 pre-pandemic levels.

The downward trend continued in 2021, with total collisions decreasing by 25.6% compared to 2019 and decreasing by 0.31% compared to 2020. Fatal and injury collisions decreased by 32.1% in 2020 and by 37.7% in 2021, compared to 2019.

**Map of Intersections and Road Segments with Highest Frequency of Fatal and Injury Collisions, 5 Year Average (2017–2021)**

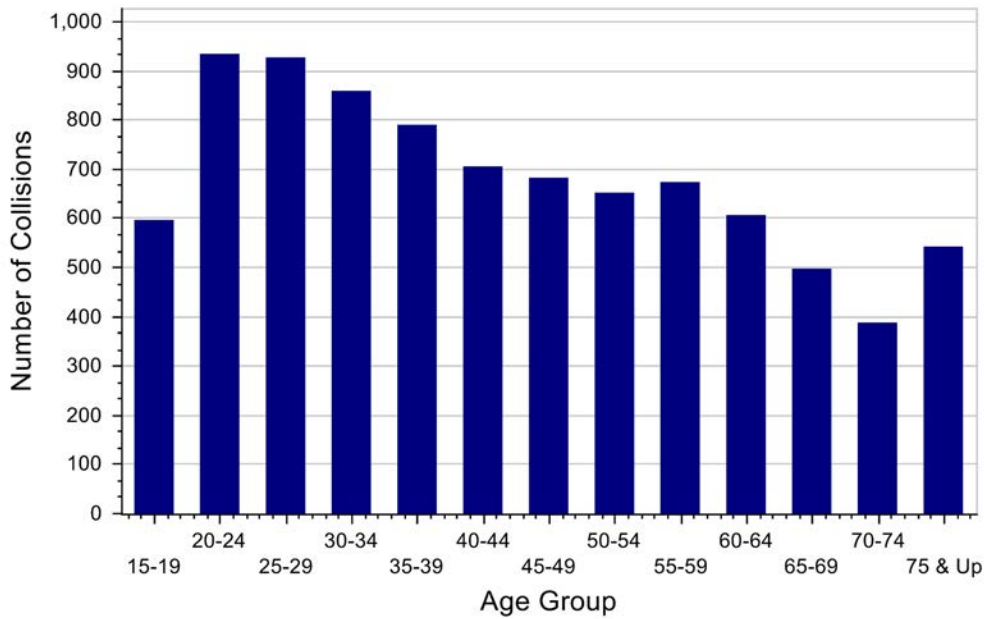


**Intersections and Road Segments with Highest Frequency of Fatal and Injury Collisions, 5 Year Average (2017–2021)**

Intersections		Collision Frequency
①	Clarence Street at Dalhousie Street	22
②	Edmondson Street at Wayne Gretzky Parkway	20
③	Clarence Street at Colborne Street	17
④	Wayne Gretzky Parkway at Henry Street	16
⑤	Clarence Street South at Icomm Drive	13
⑥	St. Paul Avenue at Terrace Hill Street	13
⑦	Charing Cross Street at West Street	12
⑧	Lynden Road at Wayne Gretzky Parkway	12
⑨	Mount Pleasant Street at Veterans Memorial Parkway	12
Road Segments		Collision Frequency
1	Wayne Gretzky Parkway between Henry Street and Morton Avenue East	8
2	West Street between Byrne Street and Edmondson Street	5
3	King George Road between 82 King George Road and Ramp King George Road to Highway 403	5
4	West Street between Charing Cross Street and Harris Avenue	4
5	Phelps Road between Cockshutt Road and Mount Pleasant Road	4

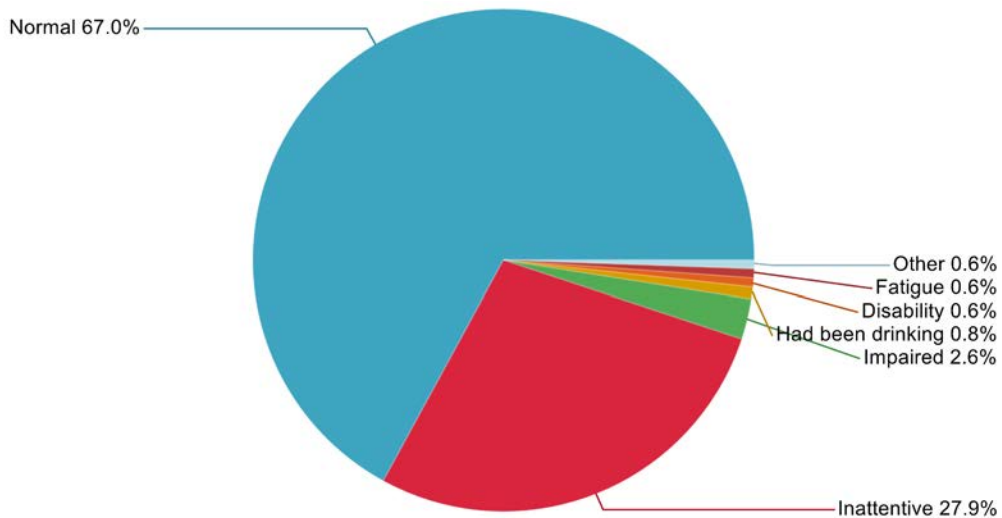
# Drivers

Research shows that among the three factors of drivers, roads, and vehicles, drivers have the largest contribution to collisions. A review of drivers showed that 30.7% of drivers involved in collisions were between 20 and 34 years old. Also, slightly more male drivers (54.6%) were involved in collisions than female drivers.

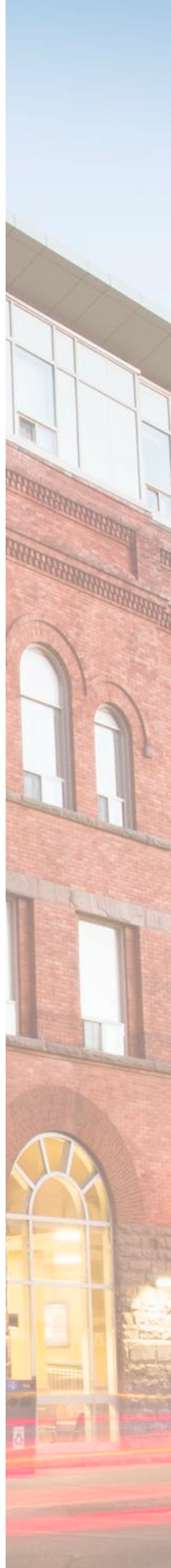


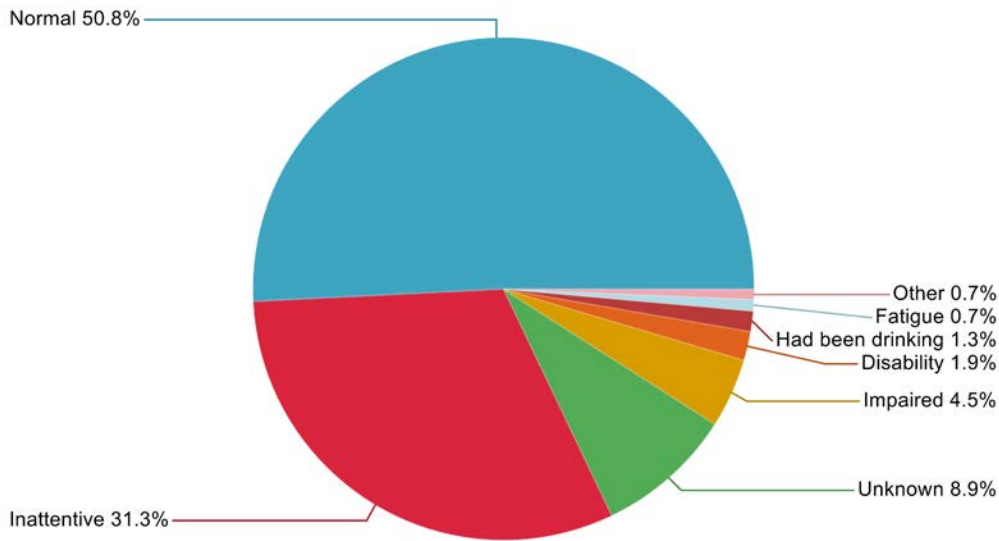
**Collisions by Driver Age, 5 Years (2017–2021)**

Distracted driving is one of the leading contributing factors to collisions in many jurisdictions including the City of Brantford. It is difficult to identify whether a driver, cyclist, or pedestrian was distracted at the time of a collision. Based on observations made by police officers, in 27.9% of all collisions and in 31.3% of fatal and injury collisions, drivers were inattentive (distracted) in 2017–2021. It is possible that the actual percentage of distracted driving collisions is higher.



**All Collisions by At-Fault Driver Condition, 5 Years (2017–2021)**

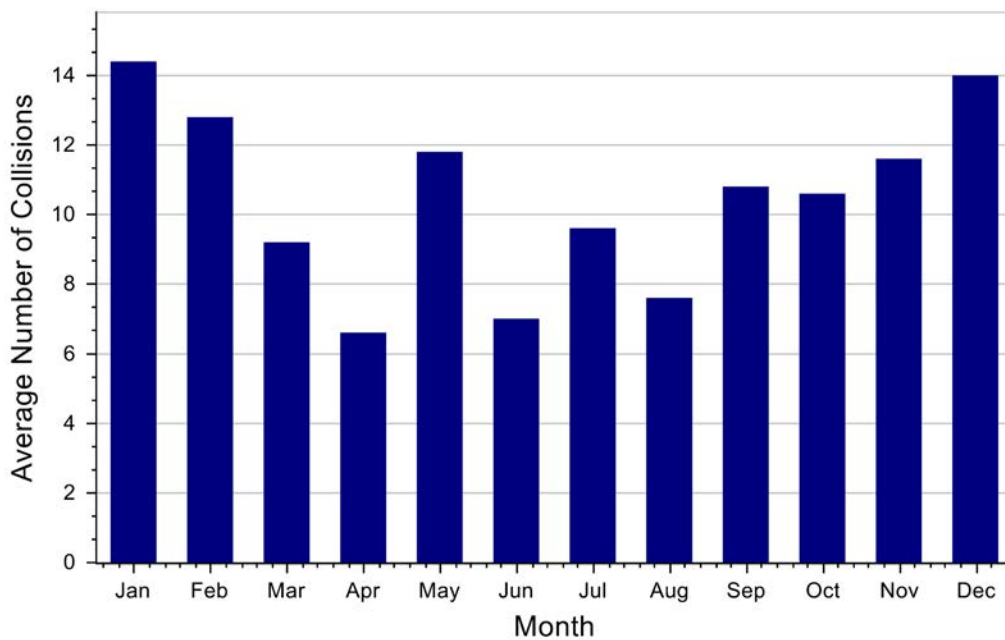




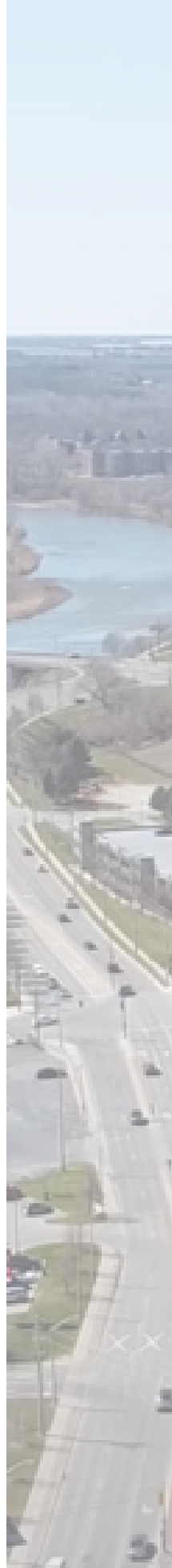
### Fatal and Injury Collisions by At-Fault Driver Condition, 5 Years (2017–2021)

Impairment is another driver-related factor contributing to collisions. A review of driver conditions shows that driver impairment / alcohol consumption likely contributed to 3.4% of total collisions and 5.8% of fatal and injury collisions in 2017–2021.

Loss of control of the vehicle is a causal factor for collisions that may be noted by police. Several factors might contribute to drivers losing control such as: distraction, speed too fast for road conditions, road surface conditions, lack of adequate warnings, and vehicle mechanical deficiencies among others. The winter months of December, January and February experienced the largest number of collisions resulting from drivers losing control of their vehicle. Overall, the lost control type of collisions constituted 8.5% of all police-reported collisions.

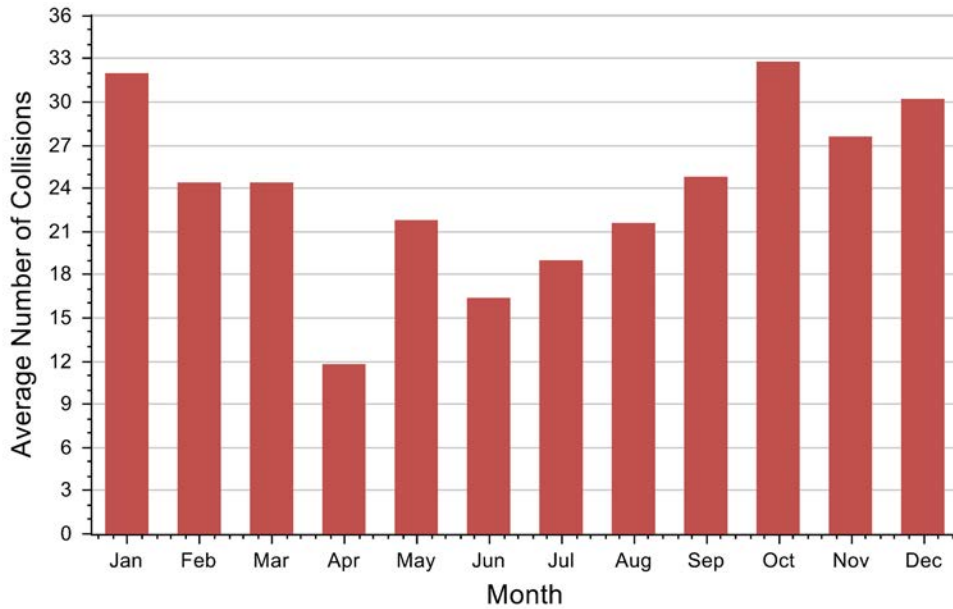


Lost Control Collisions by Month, 5 Year Average (2017–2021) - Police Reported

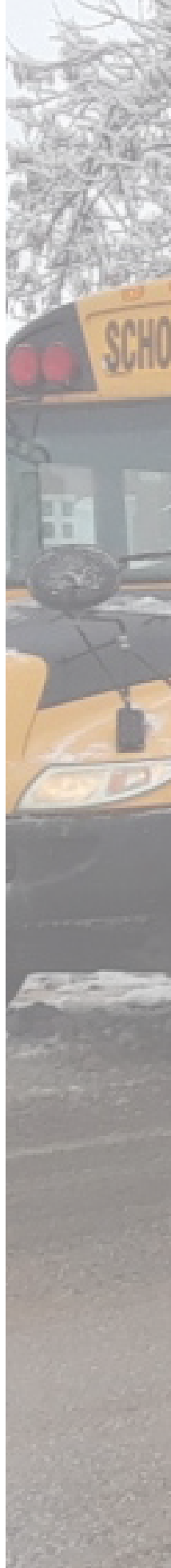


If the police officer attending to a collision scene reported that at least one of the drivers involved in the collision committed (1) following too close, (2) speed too fast for conditions, or (3) exceeding the speed limit, then the collision is categorized as speed-related.

These factors are an indication of aggressive driving where drivers choose speeds that are too fast for the road surface conditions, for the traffic congestion, or for the road geometry. Speeding related collisions were 19.3% of police-reported collisions in 2017–2021. The months of January and October experienced the highest number of speeding-related collisions.



**Speed Related Collisions by Month, 5 Year Average (2017–2021)**





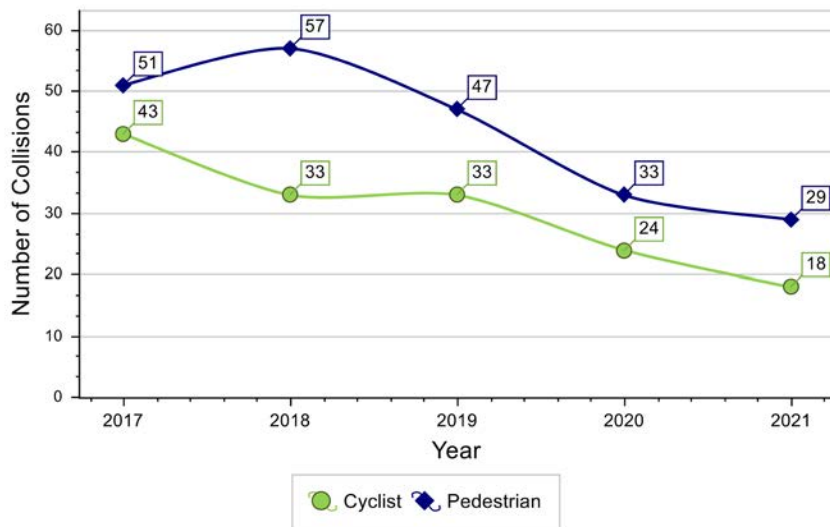


# Pedestrian and Cyclist Collisions

The City strives to create a safe road network for pedestrians and cyclists. Pedestrian and cyclist collisions in Brantford are showing a downward trend. The statistics stated below should be viewed considering the impacts of the COVID-19 pandemic on traffic volumes.

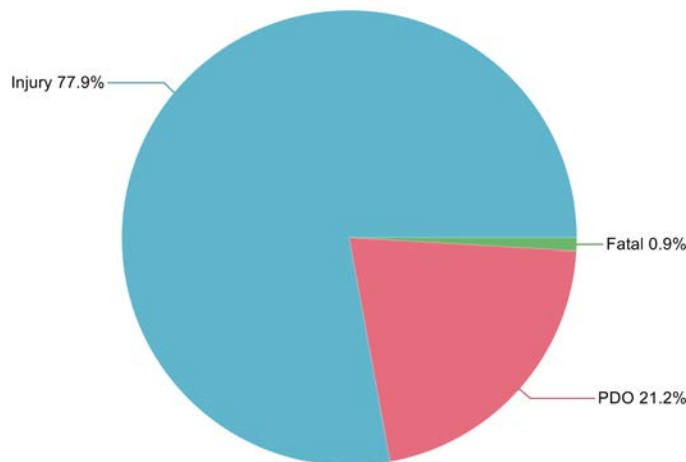
The number of pedestrian collisions fluctuated between 57 and 29 in the past 5 years. In 2021, the City experienced 29 pedestrian collisions which is 12.1% less than in 2020 (33), and 38% less than in 2019 (47). This exceeds the City’s Vision Zero goal of a 25% reduction compared to 2019. There were no pedestrian fatalities in 2017, 2019 and 2021. There was one pedestrian fatality in each of 2018 and 2020.

The number of cyclist collisions has decreased from 43 to 18 in the past 5 years. In 2021, the City experienced 18 cyclist collisions which is 25% less than in 2020 (24), and 45% less than in 2019 (33). This exceeds the City’s Vision Zero goal of a 25% reduction compared to 2019. There were no cyclist fatalities in 2017, 2018, 2020 and 2021. There was one cyclist fatality in 2019.



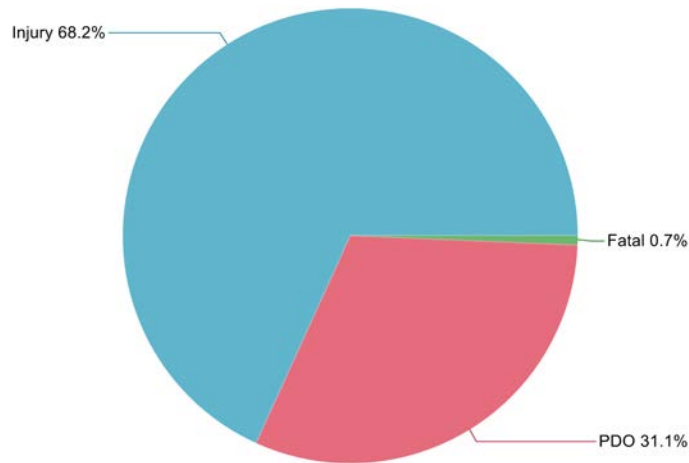
**Collisions Involving Pedestrians and Cyclists (2017–2021)**

In the City of Brantford, 77.7% of all pedestrian collisions in 2017–2021 resulted in injury, 21.1% resulted in property damage only and 0.9% resulted in fatality.



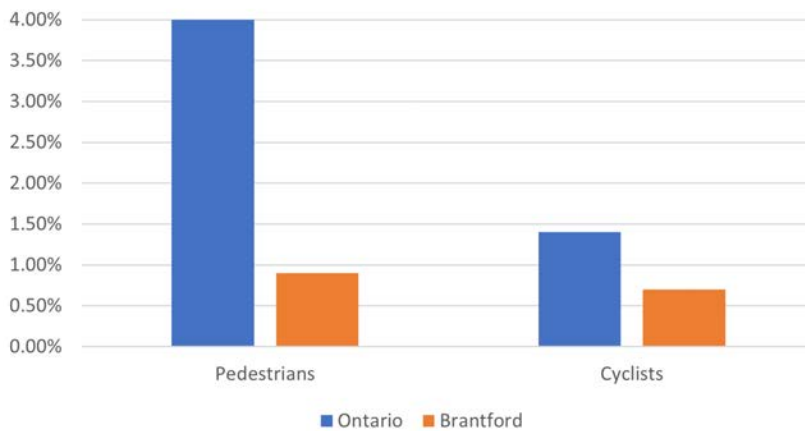
**Pedestrian Collisions by Severity, Average 5 Years (2017–2021)**

In Brantford, 68.2% of cyclist collisions in 2017–2021 resulted in injury, 31.3% in property damage only and 0.7% resulted in fatality.



### Cyclist Collisions by Severity, Average 5 Years (2017–2021)

Based on a review of data for the province of Ontario<sup>7</sup> and Brantford’s data for 2017–2021, a much smaller percentage of pedestrians and cyclists are fatally injured in collisions in Brantford compared to collisions province-wide.



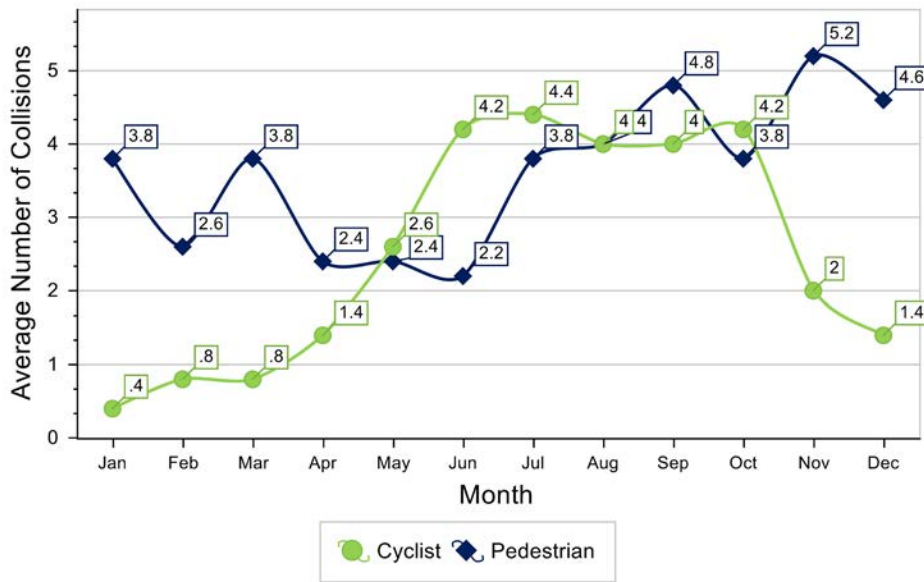
### Percentage of Fatality Among Injury Collisions for Pedestrians and Cyclists, Ontario-wide compared to City of Brantford

<sup>7</sup> <https://www.ontario.ca/document/ontario-road-safety-annual-reports-orsar>



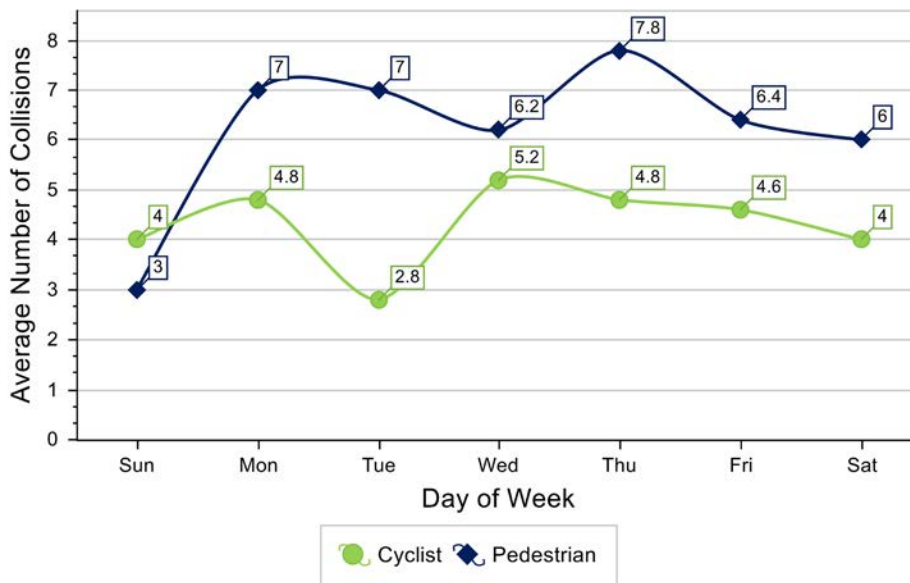
## Pedestrian and Cyclist Collisions by Month and Day

The largest number of pedestrian collisions occurred in the month of November in 2017–2021, which is consistent with other municipalities in Ontario. The largest number of cyclist collisions occurred from June to October, when cycling is generally a more frequent form of transportation compared to other months.



## Collisions Involving Pedestrians and Cyclists by Month (5-Year Average, 2017–2021)

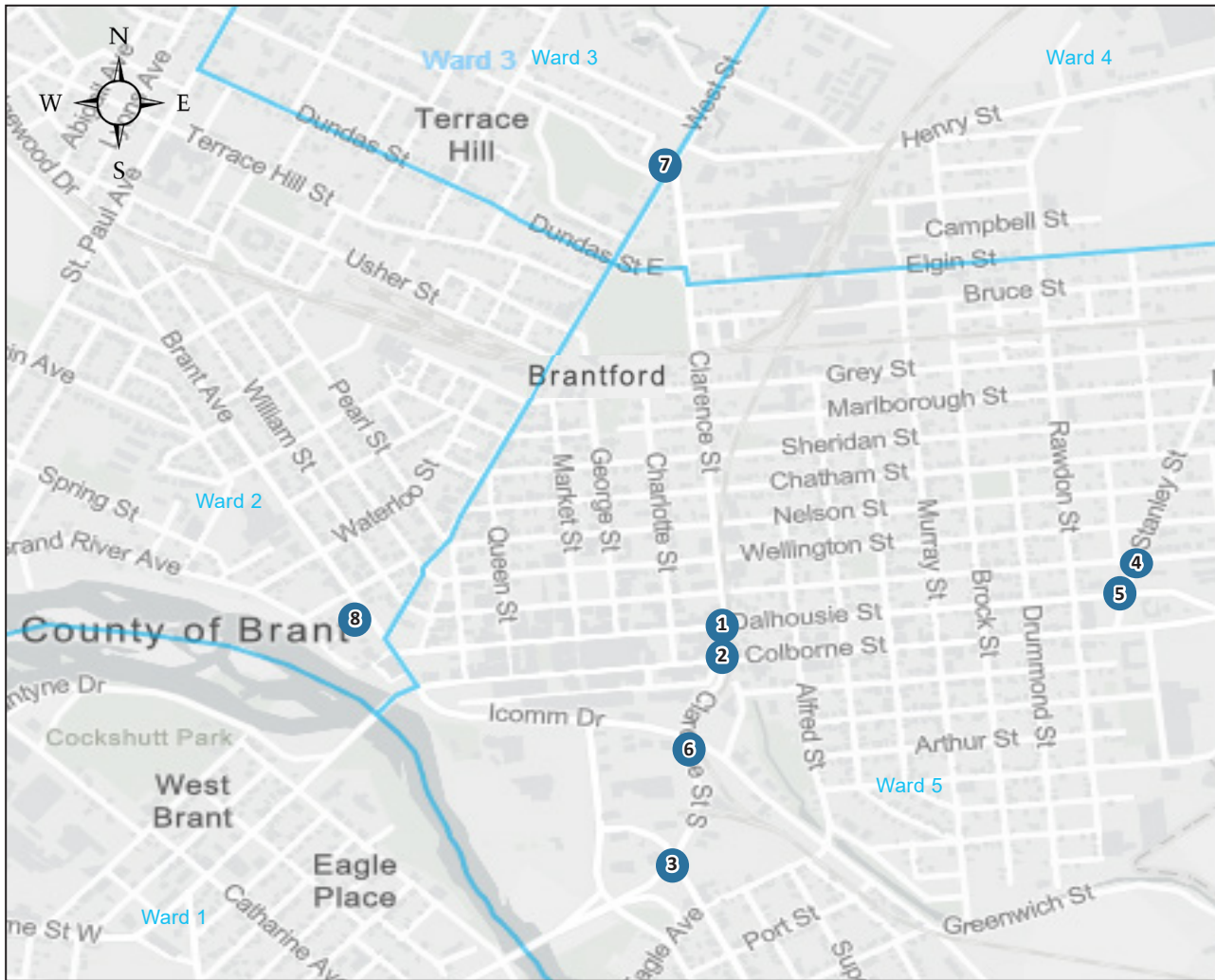
Thursdays experienced the largest numbers of pedestrian and cyclist collisions among all days of a week in 2017–2021.



## Collisions Involving Pedestrians and Cyclists by Day of the Week (5-Year Average, 2017–2021)

# Pedestrian and Cyclist Collisions by Location

**Map of Intersections with the Highest Frequency of Pedestrian Fatal and Injury Collisions (2017–2021)**

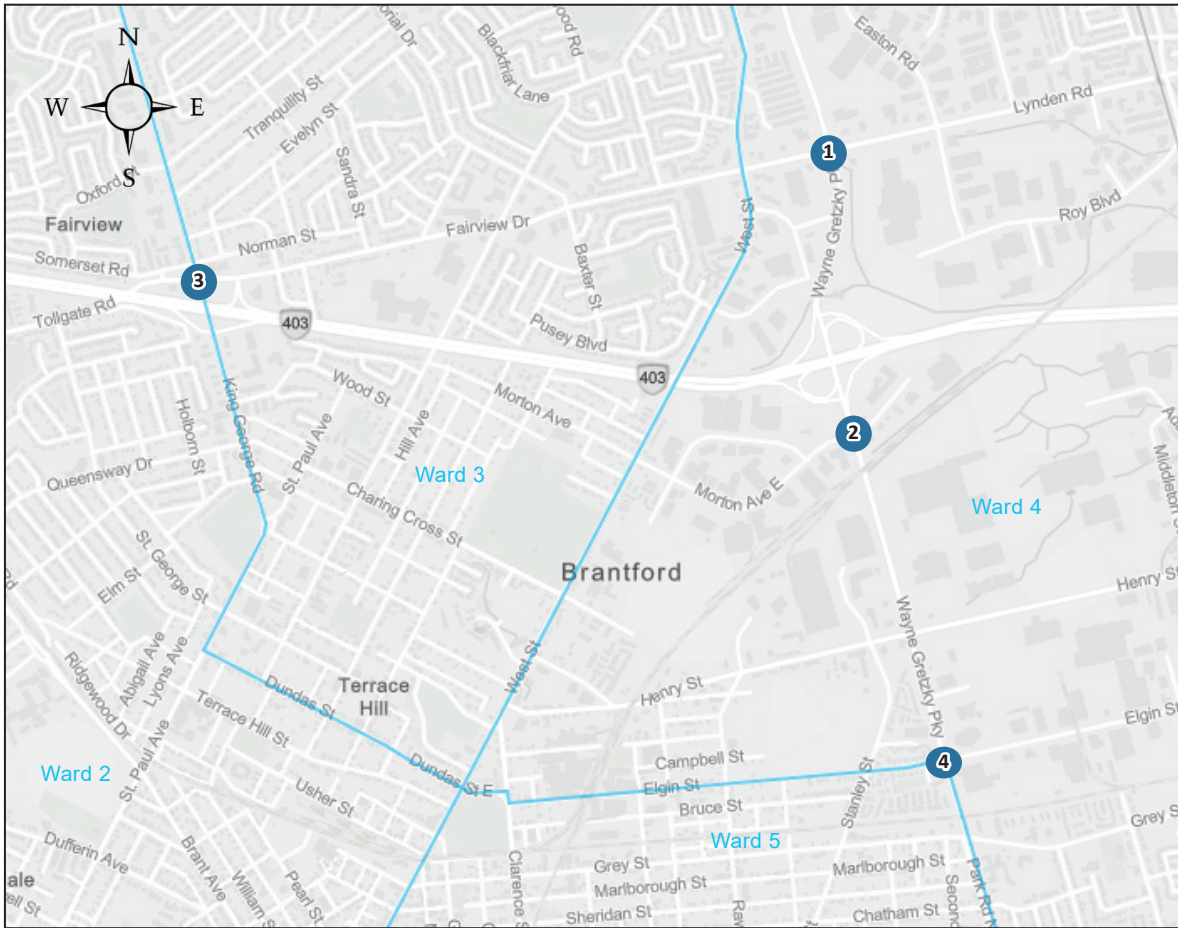


**Intersections with the Highest Frequency of Pedestrian Fatal and Injury Collisions (2017–2021)**

Intersection		Collision Frequency
1	Clarence Street at Dalhousie Street	6
2	Clarence Street at Colborne Street	5
3	Erie Avenue at Veterans Memorial Parkway	4
4	Darling Street at Stanley Street	3
5	Dalhousie Street at Stanley Street	3
6	Clarence Street at Icomm Drive	3
7	Clarence Street at West Street	3
8	Brant Avenue at Church Street	3

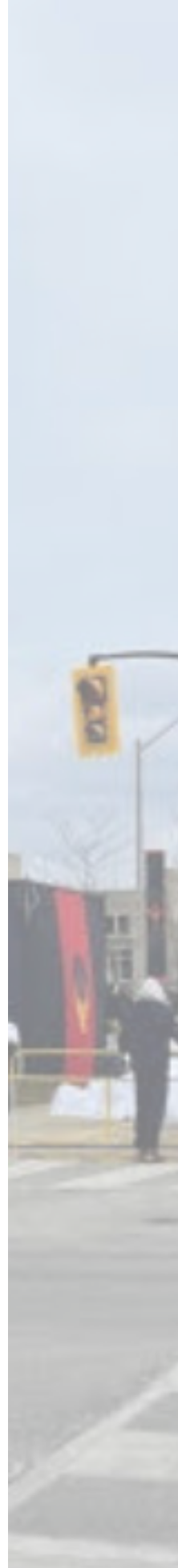


## Map of Intersections with the Highest Frequency of Cyclist Fatal and Injury Collisions (2017–2021)

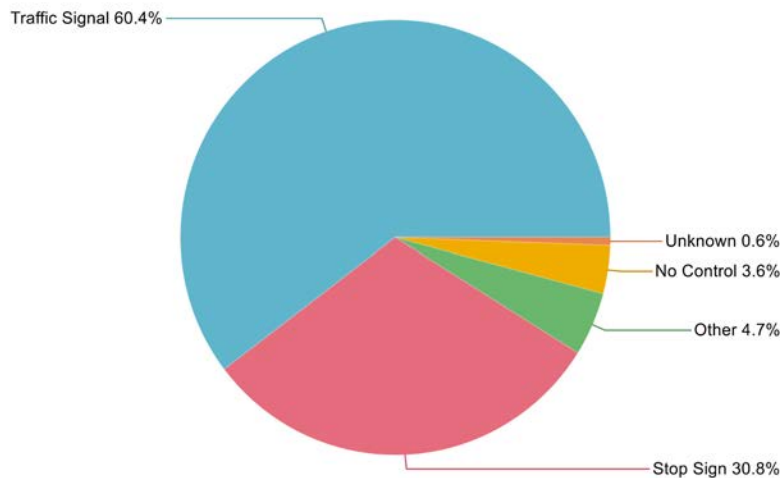


### Intersections with Highest Frequency of Cyclist Fatal and Injury Collisions (2017–2021)

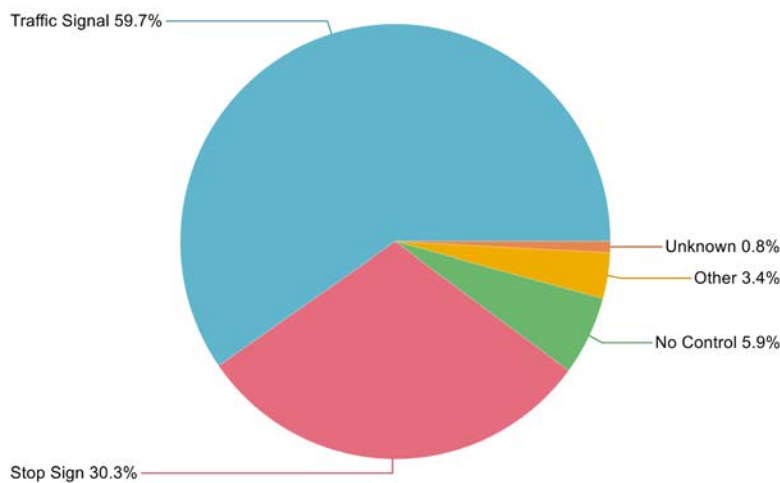
	Intersection	Collision Frequency
①	Lynden Road at Wayne Gretzky Parkway	4
②	Morton Avenue East at Wayne Gretzky Parkway	3
③	Fairview Drive at King George Road	3
④	Elgin Street at Wayne Gretzky Parkway	3



By far the majority of pedestrian and cyclist collisions in 2017–2021 occurred at intersections (77.9% and 78.8% respectively). The remainder occurred on road segments. Among the 77.9% of pedestrian collisions that occurred at intersections, 60.4% occurred at signalized intersections and 30.8% occurred at stop-controlled intersections. Among the 78.8% of cyclist collisions that occurred at intersections, 59.7% occurred at signalized intersections and 30.3% occurred at stop-controlled intersections.



**Pedestrian Collisions by Intersection Control Type, Average 5 Years (2017–2021)**



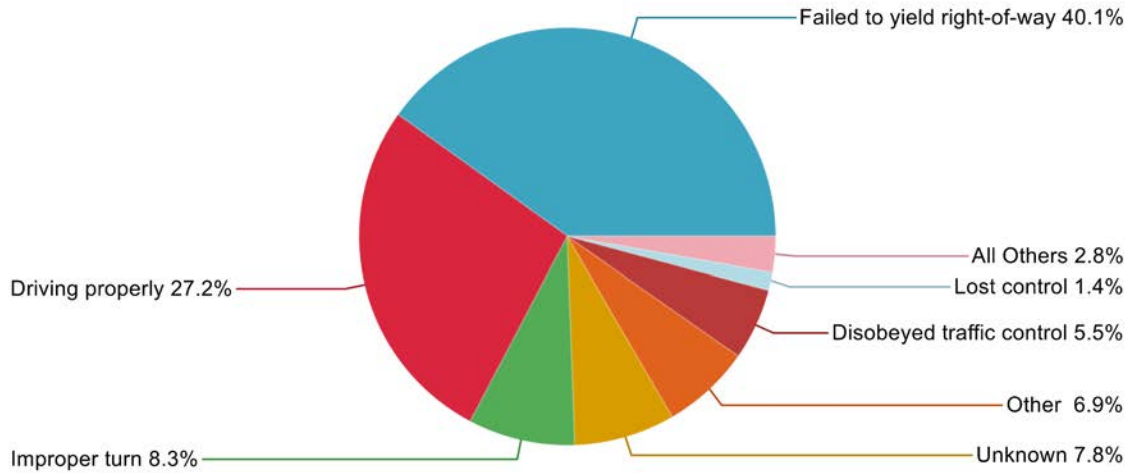
**Cyclist Collisions by Intersection Control Type, Average 5 Years (2017–2021)**



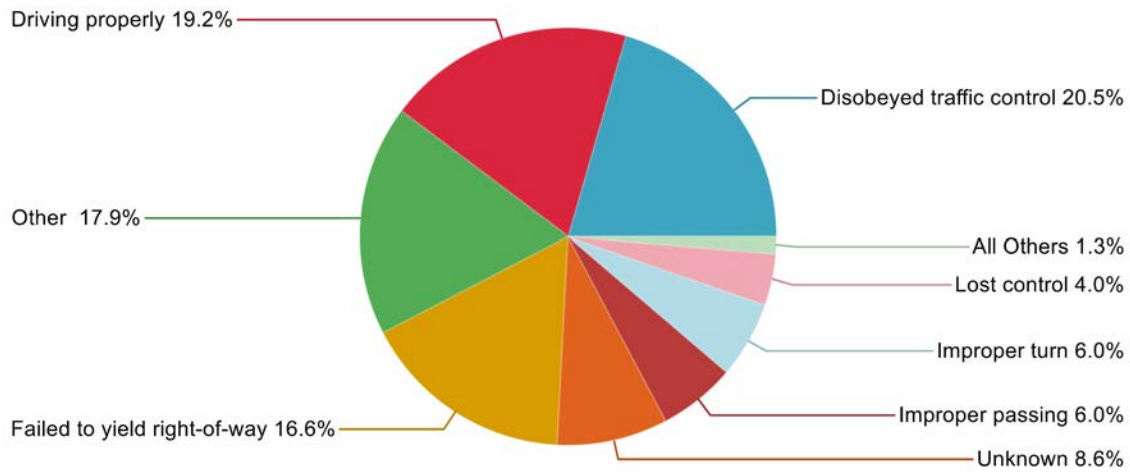
## Pedestrian and Cyclist Collisions by Action

A review of driver actions involved in pedestrian and cyclist collisions from 2017–2021 shows that 40.1% and 16.6% of drivers failed to give the right of way to pedestrians and cyclists respectively.

In 5.5% of pedestrian collisions and 20.5% of cyclist collisions, drivers disobeyed traffic control.



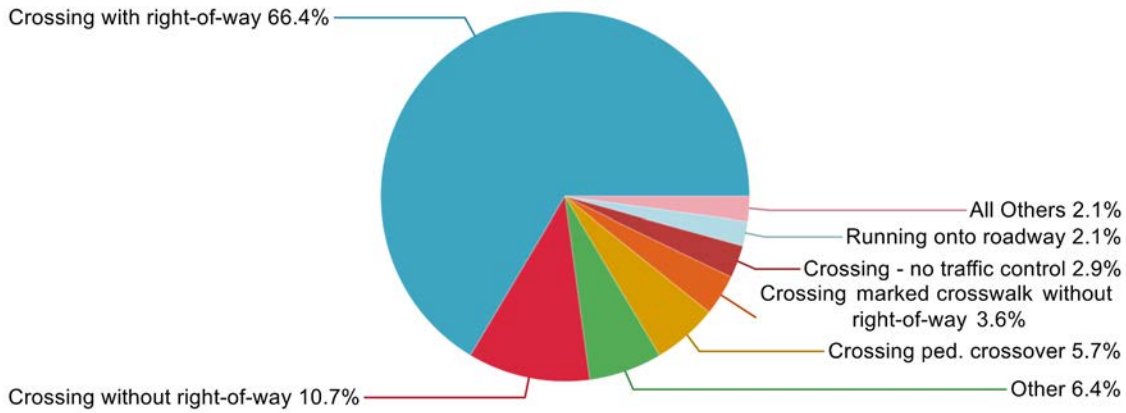
### Pedestrian Collision by Driver Action, Average 5 Years (2017–2021)



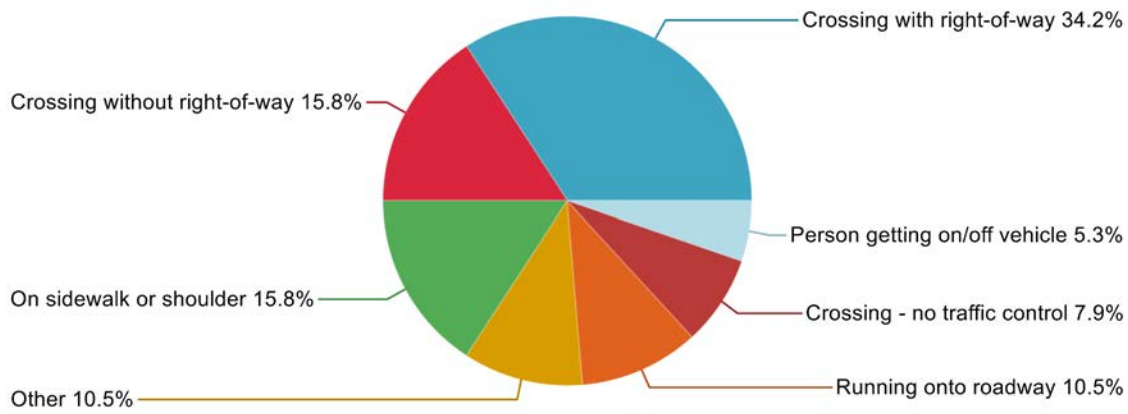
### Cyclist Collision by Driver Action, Average 5 Years (2017–2021)



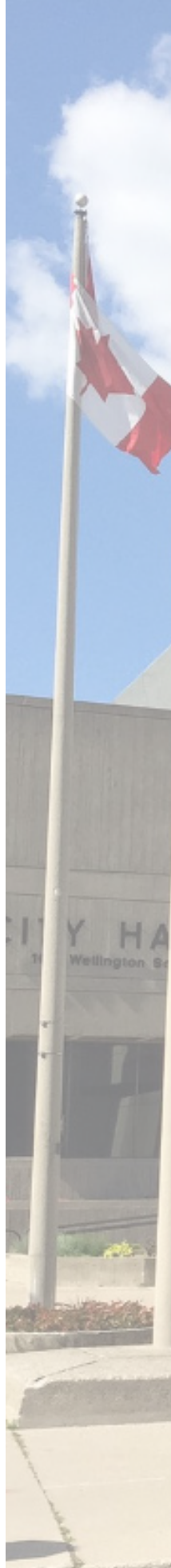
A review of pedestrian actions in collisions from 2017–2021 shows that in 10.7% of pedestrian collisions at intersections, the pedestrian was crossing without the right-of-way (i.e., jaywalking). In 15.8% of pedestrian collisions at midblocks (non-intersection locations), pedestrians were jaywalking, and in 15.8% pedestrians were walking on the sidewalk or the road shoulder.



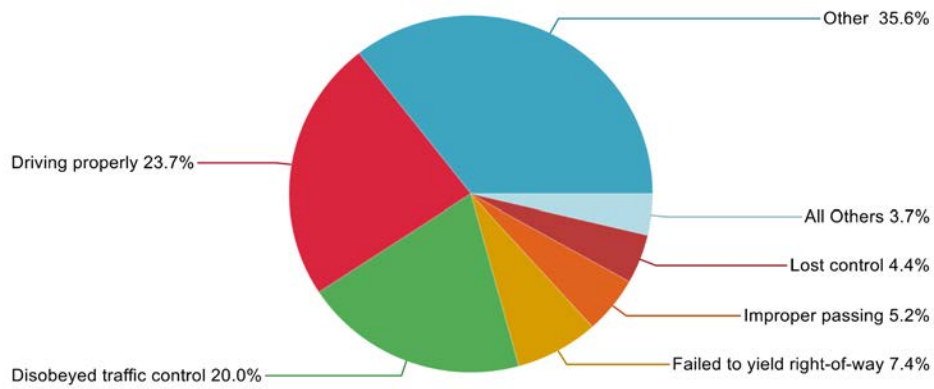
**Intersection Pedestrian Collisions by Pedestrian Action, Average 5 Years (2017–2021)**



**Midblock Pedestrian Collisions by Pedestrian Action, Average 5 Years (2017–2021)**



A review of cyclist actions in collisions from 2017–2021 shows that in 20% of cyclist collisions, the cyclists failed to obey traffic control and in 7.4% cyclists failed to yield right-of-way.



**Cyclist Collisions by Cyclist Action, Average 5 Years (2017–2021)**



## Conclusions

The City of Brantford met or exceeded the 2018 Vision Zero Road Safety Plan goals of:

- Reducing total collisions by 10%: There were 1,293 collisions in 2021 compared to 1,739 collisions in 2019 which is a reduction of 25.6%;
- Reducing the total number of collisions involving cyclists and pedestrians by 25%: There were 29 pedestrian collisions in 2021 compared to 47 in 2019 which is a reduction of 38%. There were 18 cyclist collisions in 2021 compared to 33 on 2019 which is a reduction of 25%; and
- Reducing the number of personal injuries resulting from collisions by 25%: There were 130 collision-related personal injuries in 2021 compared to 208 collision-related personal injuries in 2019 which is a reduction of 37.5%.

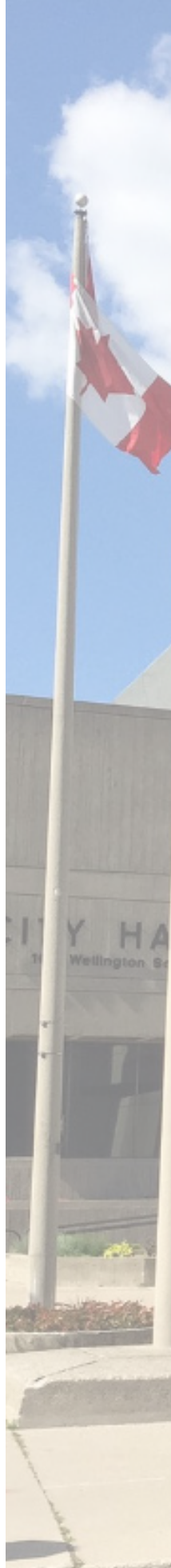
It is important to view the above noted statistics considering the COVID-19 pandemic and the impact it had in 2020 and 2021 on the reduction of traffic volumes. The City should continue monitoring the collision statistics in the future years to see if the trends will continue.

The goal of reducing fatalities to zero has not yet been met; however, there were 2 fatalities in 2021 compared to 4 fatalities in 2019 which is a reduction of 50%. Road safety-related actions that are already underway may improve this statistic and allow Brantford to reach the goal of zero fatalities by the target date of 2026.

The collision analyses conducted in this study reveal a few emphasis areas for the City to further focus on in order to improve road safety and reach the goals of the Vision Zero plan:

- Single motor vehicle collisions on road sections (46.6% of all collisions on road sections were single motor vehicle collisions);
- Signalized intersections experienced 66.6% of all collisions; also, the majority of pedestrian and cyclist collisions occurred at signalized intersections in Brantford;
- Hot spot locations as identified in this report (high frequency collision location) and other City initiatives to identify hot spots; and
- Distracted driving which was a contributing factors to at least 31.3% of fatal and injury collisions.

Engineering remedial actions (countermeasures) can address the majority of issues contributing to collisions in the emphasis areas. However, road safety is multidisciplinary and requires collaboration of all professionals in the City who play a part in road safety including police, public health, school boards, and all citizens in the City of Brantford.



BRANTFORD YMCA

