

Traffic Collision Statistics Report 2022



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2022 Collision Quick Facts

- 1,522 collisions occurred on public roadways; 37% of these collisions occurred on Provincial Highways.
- 24% increase in total collisions in 2022 when compared to 2021.
- 8 fatal collisions occurred resulting in 11 fatalities.
- All 11 fatal collisions occurred on Provincial Highways.
- 71% of collisions in Strathcona County were property damage only (PDO).
- 437 injury collisions (29% of collisions) occurred on public roadways. Most injury collisions were classified as 'minor', 23 collisions required hospitalization representing 5% of all injury collisions.
- Individuals aged 35-44 were the most likely to be injured in a collision.
- No major injury collision occurred on residential roads in 2022.
- 52% of all collisions occurred at intersections and 26% of these occurred at Provincial Highway intersections.
- 71% of fatal and major injury collisions took place on a Provincial Highway.
- 100% of fatal collisions took place on a Provincial Highway in 2022.
- Following too closely was the most common type of driver action related to the cause of a collision in 2022.
- The highest number of collisions took place in November.
- 9% of all collisions took place between 5pm and 6pm.
- 16% of all collisions were wildlife related.
- An additional 524 collisions took place on private property, typically parking lots.

Collision Comparison 2021 to 2022

Collision Statistics	2021	2022	Change
All Roads Within County			
Total Collisions	1226	1522	▲
Fatal Collisions	4	8	▲
Fatalities	5	11	▲
Major Injury Collisions	10	23	▲
Major Injuries	12	28	▲
Minor Injury Collisions	331	414	▲
Minor Injuries	466	589	▲
PDO Collisions	881	1077	▲
Collisions per 1,000 population	12.4	15.2	▲
Injury Collisions* per 1,000 population	3.5	4.4	▲
Collision Injuries* per 1,000 population	4.9	6.3	▲
Pedestrian Collisions	9	7	▼
Fatal and Major Pedestrian Injuries	1	1	–
Bicycle Collisions	10	6	▼
Fatal and Major Cyclist Injuries	0	0	–
Motorcycle Collisions	7	10	▲
Fatal and Major Motorcyclist Injuries	1	5	▲
Intersection Collisions	470	794	▲
Animal Collisions	200	239	▲
Alcohol Related Collisions	39	22	▼
Commercial Vehicle Collisions	66	106	▲
County Owned Roads			
Total Collisions	779	956	▲
Fatal Collisions	1	0	▼
Major Injury Collisions	6	9	▲
Minor Injury Collisions	205	269	▲
PDO Collisions	567	678	▲
Injury Collisions* per 1,000 population	2.14	2.78	▲

*Includes Fatal, Major Injury and Minor Injury

Section 1: Introduction

1.1 About This Report

This report provides a summary of motor vehicle collisions reported from January 1, 2022 to December 31, 2022, within Strathcona County. Strathcona County maintains a database, Traffic Crash Location System (TCLS), which contains all reportable collisions that occur on public roadways within County boundaries (both County-owned and Provincial).

The information is collected from the Provincial report form, which is completed by members of the Royal Canadian Mounted Police (RCMP), either on paper at the scene of the collision, or electronically at the front counter of the detachment. The database reflects all reported collisions on public roadways that results in property damage of \$2,000 or greater, as well as any collision that results in a minor injury, major injury, or fatality.

The information presented in this report is based on reported incidents at the time of printing. Due to ongoing police investigations, some data presented in this report may be subject to revision.

Significance of Collisions Statistics

Strathcona County endorses the Safe System approach philosophy in the implementation of transportation network operations and maintenance to support the goal that no one is seriously injured or killed. At the heart of the Safe System Approach is the need to make data driven decisions to improve road safety. Collision data is used to develop, establish, and implement initiatives using the 5 E's of traffic safety: engineering, enforcement, education, evaluation and engagement. Some of the major tasks include:

- Developing road safety projects and programs such as education, enforcement, and communication campaigns;
- Identifying and investigating high risk road safety situations and establishing countermeasures and priorities to correct the identified hazards or potential hazards;
- Identifying safety and communication needs of special user groups, such as older drivers, medically at-risk drivers, pedestrians, bicyclists, motorcyclists, and commercial vehicles;
- Managing and supporting budget planning for annual and capital improvement programs;
- Defining collision reduction targets and monitoring progress towards achieving these targets.

1.2 About Strathcona County

Set in the centre of Alberta's energy and agricultural heartland, Strathcona County is a thriving community of more than 100,000 residents. Strathcona County is made up of the urban area of Sherwood Park and a large rural area of farms, acreages and eight smaller hamlets.

Strathcona County is a large municipality, covering 1,262 km², with a variety of land uses.

Table 1: Land use by area in Strathcona County

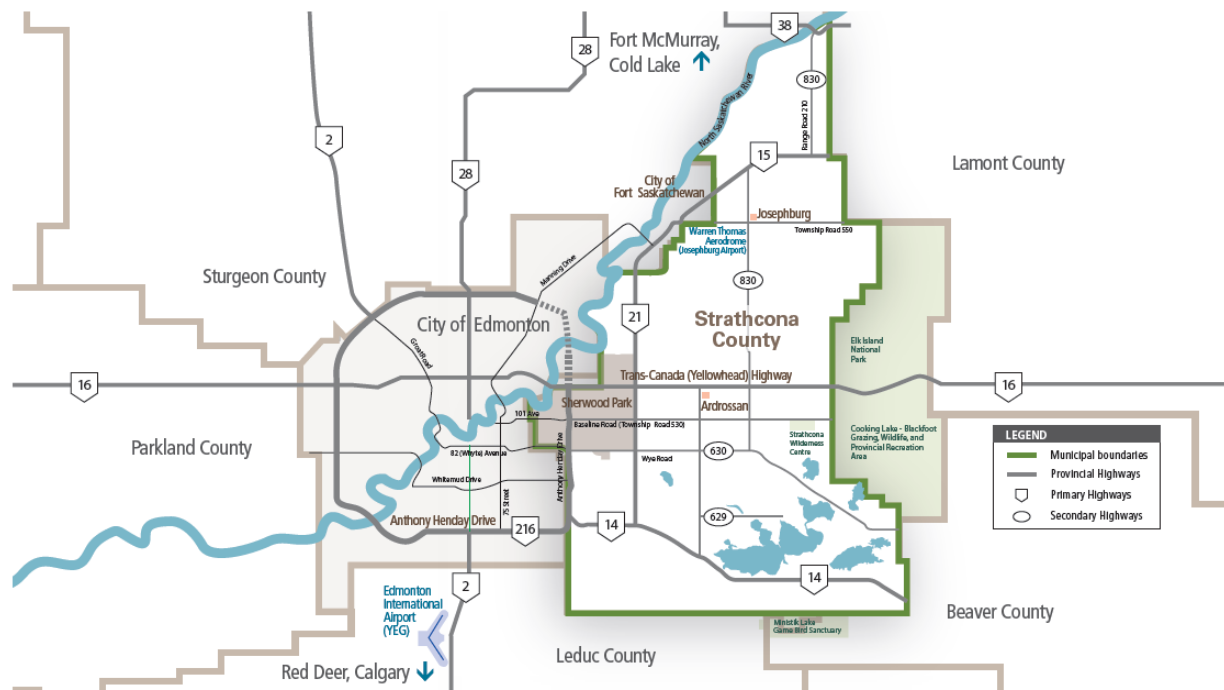
Agricultural	87,502 hectares
Industrial	9,052 hectares
Commercial	2,078 hectares
Residential	18,542 hectares
Urban village*	66 hectares
Park/recreation/natural	3,701 hectares
Other: airports, water bodies, roads, road rights-of-way	5,679 hectares

* New zoning type added for 2016 – includes mix of residential and commercial

1.2.1 Geographical Location

Strathcona County lies to the east of the City of Edmonton, Alberta, Canada, and is part of the Edmonton Metropolitan Region.

Figure 1: The Edmonton Metropolitan Region



1.2.4 Demographic Information

Population

Strathcona County is a fast-growing community, experiencing a 21.6% population increase between 2006 and 2022. The majority of this growth has taken place in Sherwood Park, which has grown by 27% during this timeframe.

Table 2: Strathcona County Population (2006-2022)

Year	Sherwood Park	**Rural Strathcona	Total Strathcona County
*2006	56,845	25,666	82,511
2008	59,409	26,112	85,521
2009	61,660	26,338	87,998
*2011	64,733	27,757	92,490
2012	65,465	26,938	92,403
2015	68,782	26,815	95,597
*2016	70,618	27,426	98,044
2018	71,332	27,049	98,381
*2021	72,017	27,208	99,225
2022	73,000	27,362	100,362

*Census of Canada ** acreages, farms, rural hamlets

Age

According to the 2022 Strathcona County Census, the average age of Urban Service Area residents was 42.2, and rural service area was 42.4 years. These averages are higher than the Alberta average of 38.1, and higher than the Canadian average of 41.7.

Table 3: Strathcona County Population Breakdown by Age (from 2022 Strathcona County Census data)

Age Group	Percentage of Population
14 and under	16.4
15-19	6.9
20-34	15.0
35-44	13.2
45-64	28.7
65 and older	19.1
Total Population (All Ages)	100

Strathcona County has 0.1% more seniors and 0.1% more children under 15 than the Canadian average.

Travel Habits

Residents of Strathcona County are heavily dependent on personal vehicles for travel. Use of personal vehicles for the journey to work is much higher in the County than the Provincial and national average.

Table 4: Mode of Commuting for Residents of the County, Alberta and Canada

Main Mode of Commuting	Strathcona County*	Alberta*	Canada*
Car, truck, van- as driver	87.5	77.7	74
Car, truck, van- as passenger	4	5.2	5.5
Public Transit	4.5	10	12.4
Walk	2	4.5	5.5
Bicycle	0.4	1.1	1.4
Other method	1.6	1.5	1.2

*as a percentage of the employed labour force aged 15 and over (from 2016 Canadian Census data)


Registered Vehicles and Licensed Drivers

According to Alberta Transportation and Economic Corridors, Sherwood Park had 73,305¹ licensed drivers in 2022. No data is available for Strathcona County but given this number exceeds the population of Sherwood Park, it likely reflects all, or most of the County.

Similarly, Alberta Transportation reports there are 82,418² motorized vehicles for highway use registered in Sherwood Park. This amounts to 1.1 vehicles per licensed driver, again reflecting the vehicle-dependent nature of Strathcona County.

1.2.5 School Zones/Playground Zones/Residential Speed Limits

Strathcona County utilizes both school zones/areas and playground zones/areas. All playground zones utilize default playground zone effective times established by the province under Alberta's Use of Highways and Rules of the Road Regulation.

 School and playground areas are indicated by advisory signs only without a black and white speed sign. They are warnings to alert drivers to be cautious of children, but the speed limit does not change from the previously posted limit.



A playground zone has a black and white 30 km/h sign below the yellow sign. Playground zone times are in effect starting at 8:30 a.m. and ending one hour after sunset daily.



¹ <https://open.alberta.ca/publications/number-of-licensed-drivers-by-city-as-of-march-31-date>

² <https://open.alberta.ca/publications/number-of-motorized-vehicles-registered-in-alberta-as-of-march-31-years>



A school zone has a black and white 30 km/h sign attached below the green school sign. The school zone speed limit is 30 km/h and is in effect the from 7:30am to 4:30pm on school days.

With the exception of school and playground zones (during specified times), collector and local roads within the County operate at 50 km/h unless otherwise posted such as several hamlets that operate at 40 km/h.

Section 2: Historical Collision Statistics

2.1 Overall: All Roads within County Borders

Over the last 10 years, total reported collisions in the County have dropped despite population growth until 2021 however there was an increase in 2022. The number of collisions decreased in the last two years, speculation suggests that this can be attributed to less traffic on the roads due to the Covid-19 pandemic. In 2022, collision occurrences have increased closer to pre-pandemic levels, although in 2022 total collisions were lower than 2018 and 2019 collision totals. Fatal and major injury collisions, however, have increased when compared to 2018 and 2019 data. This increase in major injury and fatal collisions may be attributed to the traffic volume increase and drivers adjusting back to normal traffic patterns, however, it is difficult to determine a cause.

Year	Fatal	Major*	Minor**	PDO***	Total
2013	5	27	425	1766	2223
2014	5	33	443	1842	2323
2015	5	59	537	1808	2410
2016	5	60	498	1615	2178
2017	6	49	467	1646	2168
2018	5	21	508	1379	1913
2019	7	21	474	1281	1783
2020	6	9	356	1024	1395
2021	4	10	331	881	1226
2022	8	23	414	1077	1522

Table 5: All Collisions by Consequence within County Borders 2013-2022

*One or more persons required hospitalization **One or more persons injured ***Property Damage Only

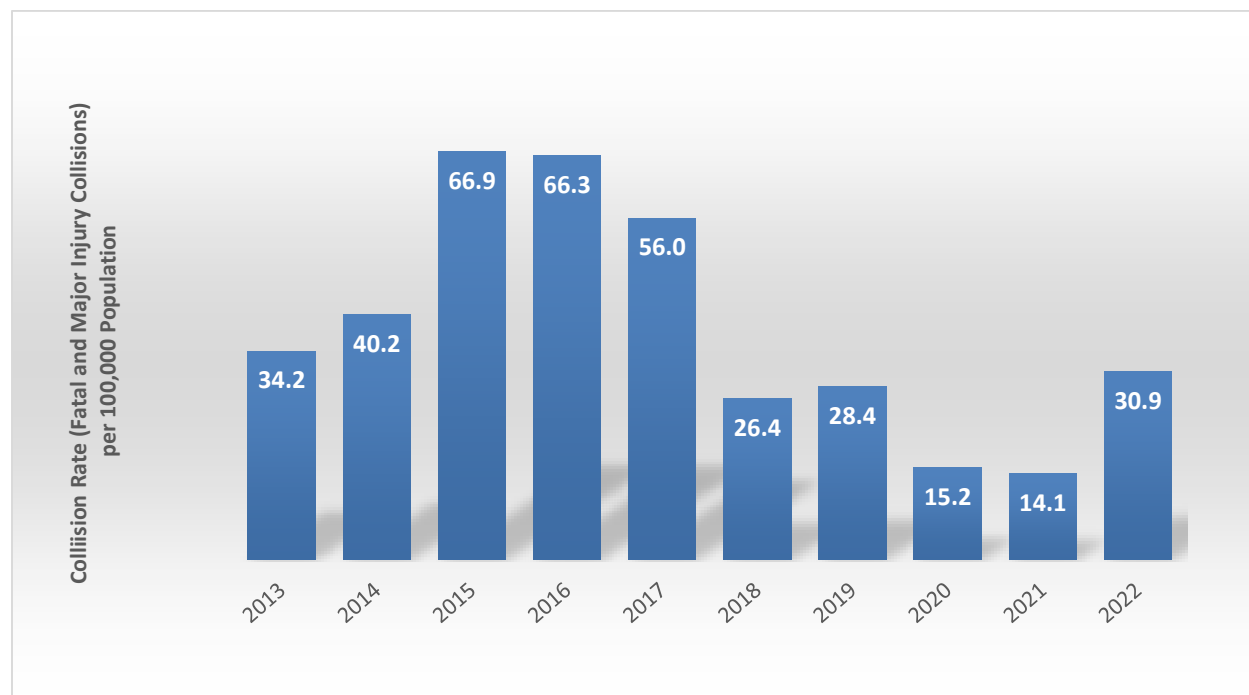
Table 6: Collision Rates per 100,000 Population on All Roads Within the County

Year	Fatal	Major*	Minor**	PDO***	Total
2013	5.3	28.9	454.7	1889.4	2378.4
2014	5.3	34.9	468.6	1948.5	2457.4
2015	5.2	61.7	561.7	1891.3	2521.0
2016	5.1	61.2	507.9	1647.2	2221.5
2017	6.1	49.9	475.5	1676.0	2207.5
2018	5.1	21.3	516.4	1401.7	1944.5
2019	7.1	21.3	480.4	1298.4	1807.2
2020	6.1	9.1	359.8	1034.9	1409.9
2021	4.0	10.1	333.6	887.9	1235.6
2022	8.0	22.9	412.5	1073.1	1516.5

*One or more persons required hospitalization **One or more persons injured ***Property Damage Only

Figure 3 combines fatal and major injury collision statistics to better assess potential trends of our most serious collisions. As mentioned, the fatal and major injury rates were lower during the pandemic restriction period (2020-2021) and are returning to pre-pandemic levels. All fatal collisions and most of the major injury collisions occurred on provincial highways, which run throughout the County.

Figure 3: Collision Rates for Fatal/Major Injuries Combined – All Roads in County (2013-2022)



2.2 County Roads Only (Excluding Provincial Highways)

Strathcona County roads experienced 956 total collisions. There is a 31% reduction in overall collisions over the last 10 years, with a 22% year over year increase since last year. No fatal and 9 major injury collisions occurred in 2022 on County roads. Most of the collisions on County roads are minor injury and property damage only. Serious injury collisions were higher during the period from 2015 to 2017 and have continued with a downward trend since that time.

Table 7: All Collisions by Consequence on County Roads

Year	Fatal	Major*	Minor**	PDO***	Total
2013	3	9	262	1115	1389
2014	1	16	266	1189	1472
2015	2	32	359	1148	1541
2016	1	36	329	1046	1412
2017	2	26	333	1099	1460
2018	0	10	343	906	1259
2019	1	5	289	795	1090
2020	2	4	208	708	922
2021	1	6	205	567	779
2022	0	9	269	678	956

*One or more persons required hospitalization **One or more persons injured ***Property Damage Only

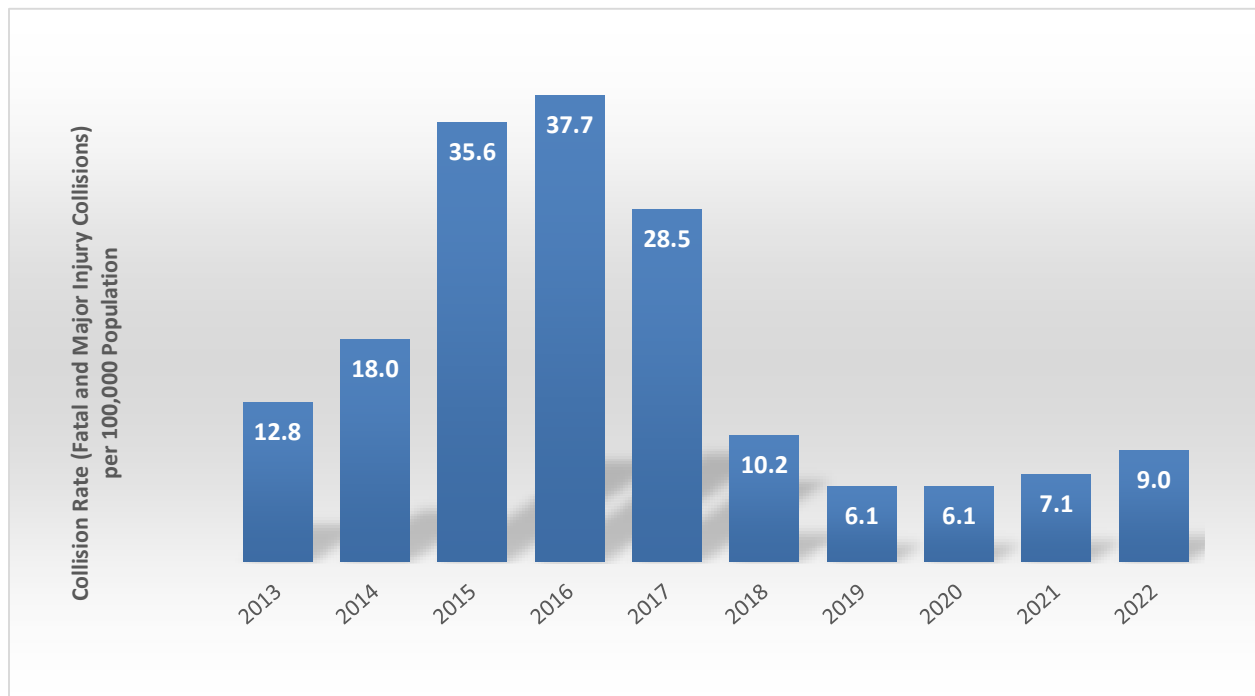
Collision rates in all categories showed a decreasing trend between 2013 to 2021 on County maintained roads. The major injury collision rate rose sharply in 2015, peaked in 2016, and declined from 2019 to 2021. Major and minor injury collision rates are higher than the previous two years, while property damage only collision rates for 2022 are lower than 2020 and prior years.

Table 8: Collision Rates per 100,000 Population on County Roads Only

Year	Fatal	Major*	Minor**	PDO***	Total
2013	3.2	9.6	280.3	1192.9	1486.1
2014	1.1	16.9	281.4	1257.8	1557.1
2015	2.1	33.5	375.5	1200.9	1612.0
2016	1.0	36.7	335.6	1066.9	1440.2
2017	2.0	26.5	339.1	1119.0	1486.6
2018	0.0	10.2	348.6	920.9	1279.7
2019	1.0	5.0	290.8	800.1	1097.0
2020	2.0	4.0	207.3	705.3	918.8
2021	1.0	6.0	206.6	571.4	785.1
2022	0.0	9.0	268.0	675.6	952.6

*One or more persons required hospitalization **One or more persons injured ***Property Damage Only

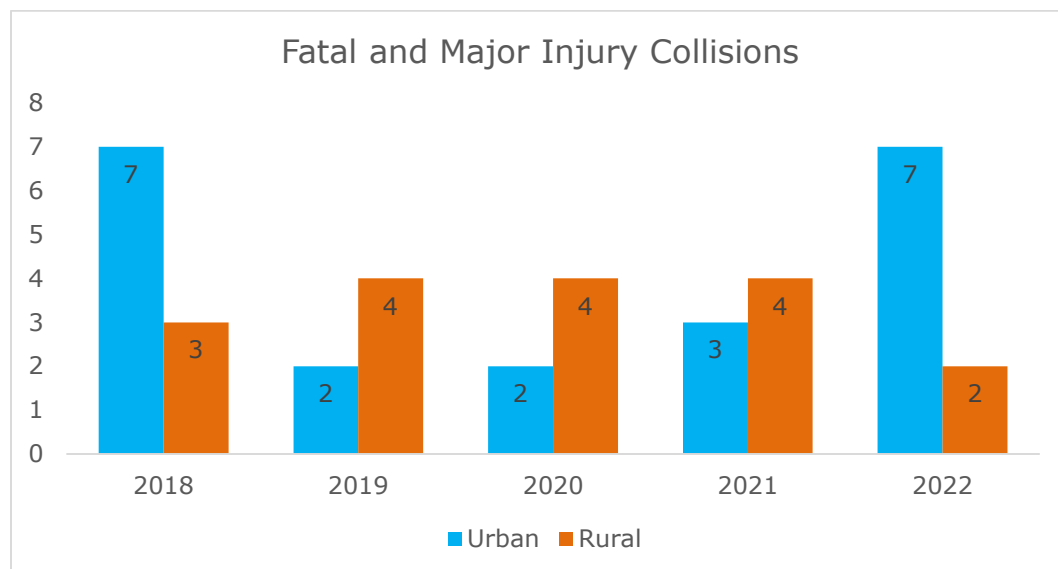
Figure 4: Collision Rates for Fatal/Major Injuries Combined – County Owned Roads (2013-2022)



2.3 County Owned Rural vs Urban Collision Trends

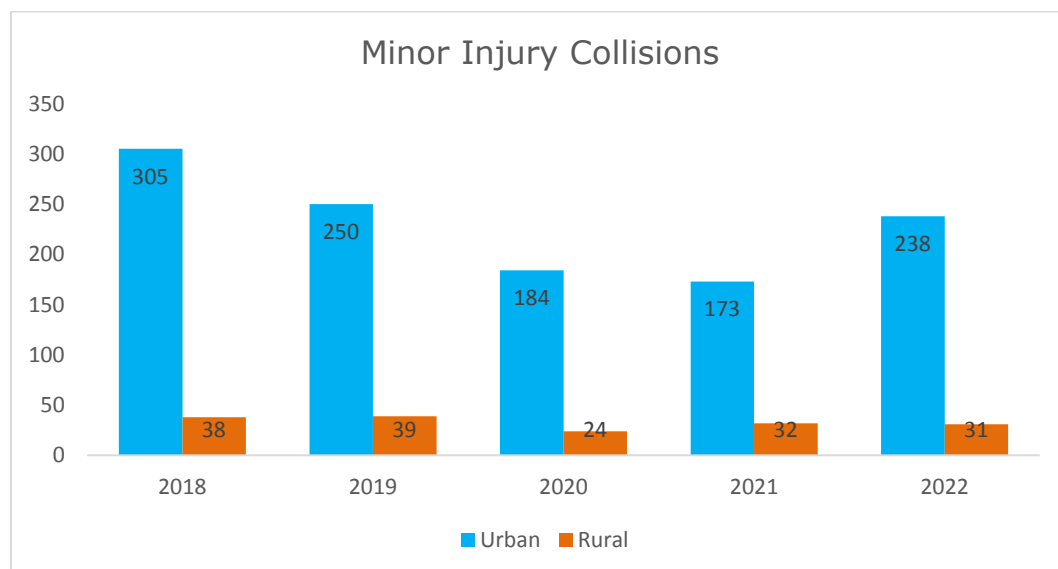
The frequency of fatal and major injury collisions was consistent in four of the last five years in rural areas, with a slight decrease in 2022. Urban roads have a higher frequency of severe injury collisions in 2022 when compared with the prior three years.

Figure 5: Fatal and Major Collisions Urban vs Rural County Owned Roads (2018-2022)



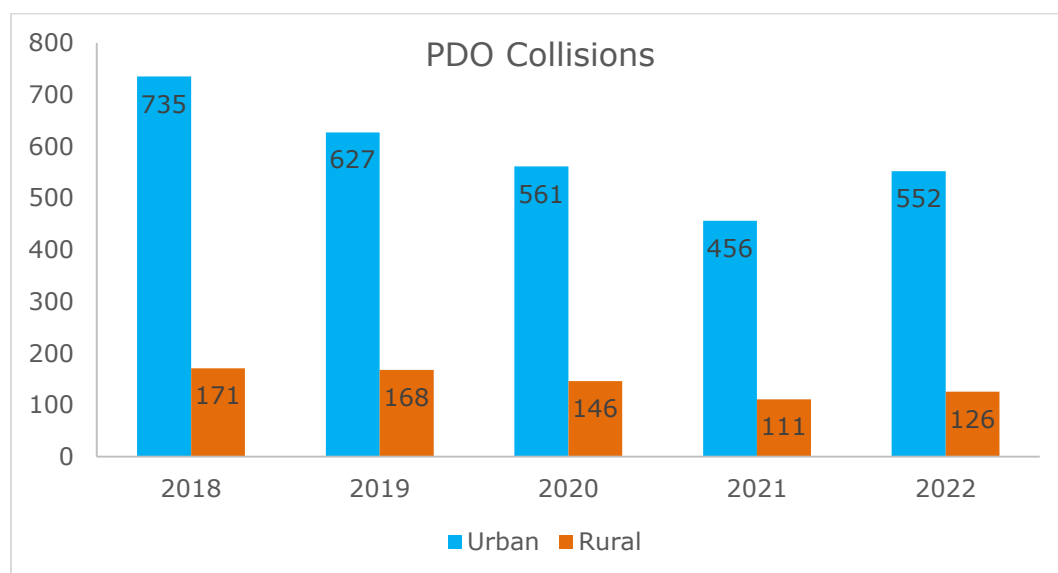
Minor injury collisions in the urban area were high in 2018 and experienced a downward trend until 2021, which was followed by an increase in 2022. Rural area minor injury collisions were constant and steady with no significant change when compared over the last 5 years.

Figure 6: Minor Injury Collisions Urban vs Rural County Owned Roads (2018-2022)



Similar to injury collisions, property damage only collisions had a downward collision trend in the urban area from 2018 to 2021 but increased in 2022. Rural area collision rates have remained relatively consistent over the last 5 years.

Figure 7: PDO Collisions Urban vs Rural County Owned Roads (2018-2022)



2.4 Provincial Highway Collisions

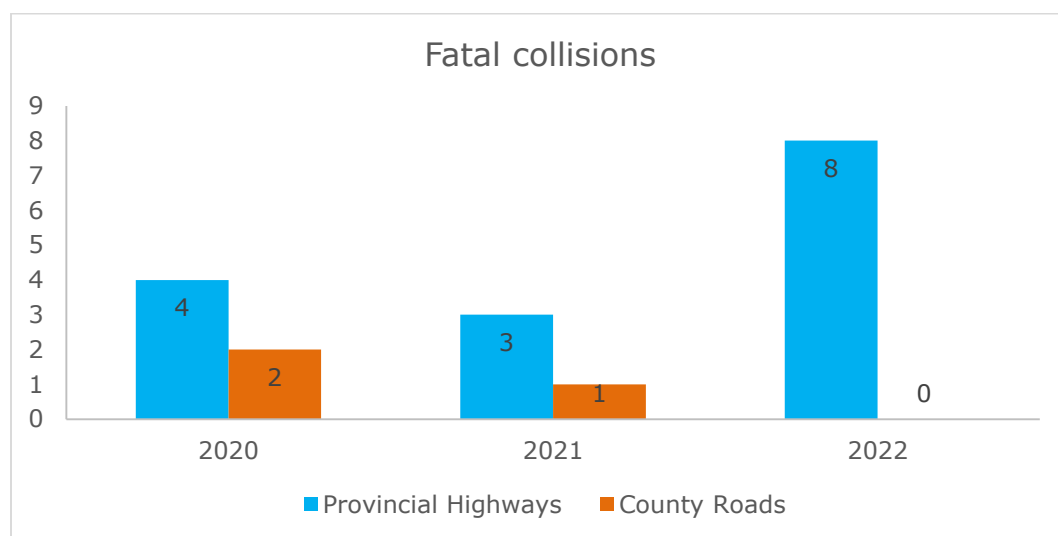
Alberta Transportation operates 225 kilometres of Provincial Highways within Strathcona County. Many of these Provincial Highways are freeways, which tend to have the lowest collision rate of any transportation facility. However, because of the high speeds that highways operated at, any collision that occurs tends to be serious. This section focuses on the collisions that occur on Provincial Highways within Strathcona County. As previously indicated, over the past 10-years, most fatal and major injury collisions in the County occurred on a Provincial Highway, generally the highest speed roads in the County, collision severity directly correlates to speed. In 2022, all eight fatal collisions occurred on highways, resulting in 11 fatalities. Both the fatal and major injury collisions increased in 2022 compared to the prior two years, and speeding was the contributor to several of these collisions.

Table 9: Provincial Highway collisions (2020-2022)

Year	Fatal	Major	Minor	PDO	Total
2020	4	5	148	316	473
2021	3	4	126	314	447
2022	8	14	145	399	566

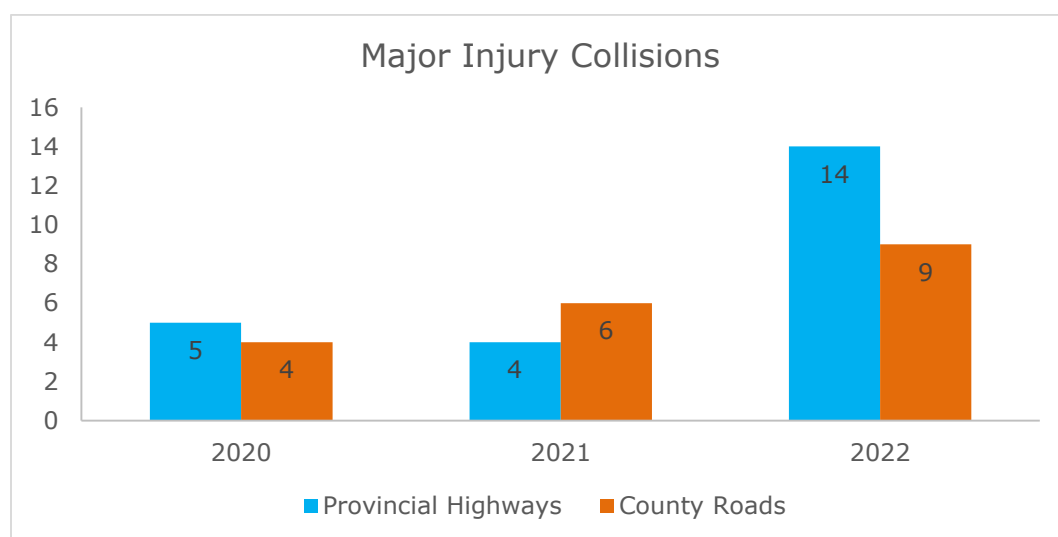
Up to 36% of all serious collisions on highways has resulted in a fatality. Figures 8 and 9 show comparisons of fatal and major injury collisions on Provincial Highways versus County owned roads.

Figure 8: Fatal collisions – Provincial Highways vs County Roads (2020-2022)



Fatal collisions mainly occur on provincial highways, there were no fatal collisions reported on County roads in 2022. Major injury collisions were also higher on provincial highways than on County roads. Both the fatal and major injury collisions are higher in 2022 than previous years.

Figure 9: Major Injury collisions – Provincial Highways vs County Roads (2020-2022)



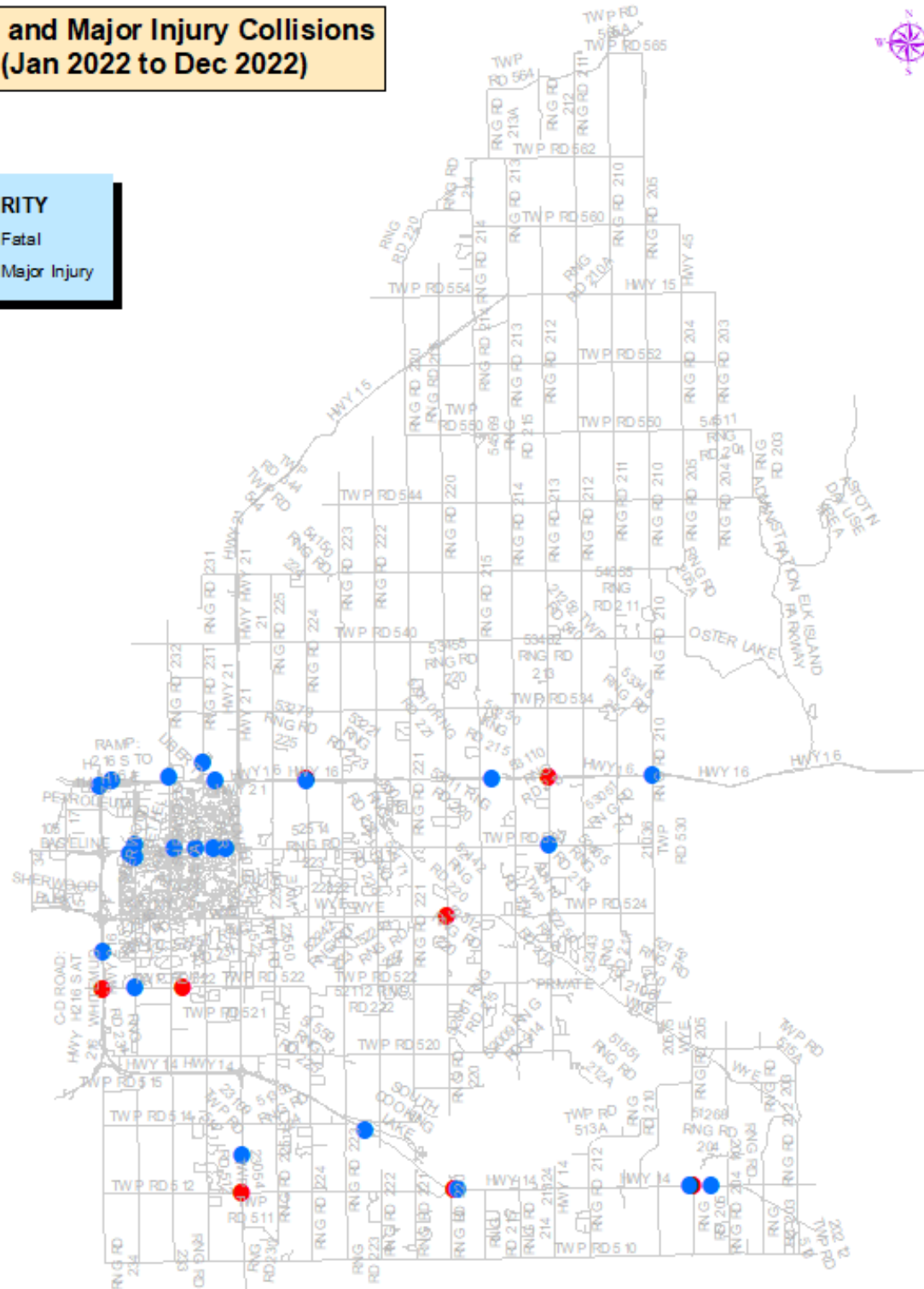
3.3 Major and Fatal Collisions

In keeping with Strathcona County's Traffic Safety Strategic Plan (TSSP), our goal is to specifically reduce collisions that cause serious injury and death. There were eight fatal and 23 major injury collisions in Strathcona County in 2022.

The following two maps illustrate the location of fatal and major injury collisions in Strathcona County. Collisions are scattered across the County and there are no patterns or hot spot locations indicated by the 2022 data. All fatal collisions occurred on provincial highways. However, the data identified specific collision types that are represented in the set of serious collisions. Right angle collisions accounted for seven out of 23 combined fatal and injury collisions, followed by six head-on collisions, and six struck object type collisions. Slippery road surface conditions due to snow/slush, driving at a higher speed, and lost control were the contributing factors for 10 collisions.

Detailed analysis of these collisions is included throughout the report, as a deeper understanding of the events and conditions that resulted in fatal and major injury collisions is important to help determine the most appropriate engineering, education, enforcement, or engagement related countermeasures to reduce the probability of another similar collision.

- Fatal
- Major Injury

 STRATHCONA
COUNTY

3.4 Drivers' Prior Action

Followed Too Closely was the most common prior action of drivers involved in collisions in 2022.

For fatal and injury (including major and minor injury) the top eight driver actions were:

1. Followed Too Closely/Rear-Ended
2. Left Turn Across Path
3. Disobey Traffic Signal
4. Ran off Road
5. Stop Sign Violation
6. Improper Turn
7. Left of Centre
8. Improper Lane Change

For collisions that involved property damage only, the top eight driver actions were:

1. Followed Too Closely/Rear-Ended
2. Struck Parked Vehicles
3. Left Turn Across Path
4. Ran off Road
5. Improper Lane Change
6. Improper Turn
7. Backed Unsafely
8. Stop Sign Violation

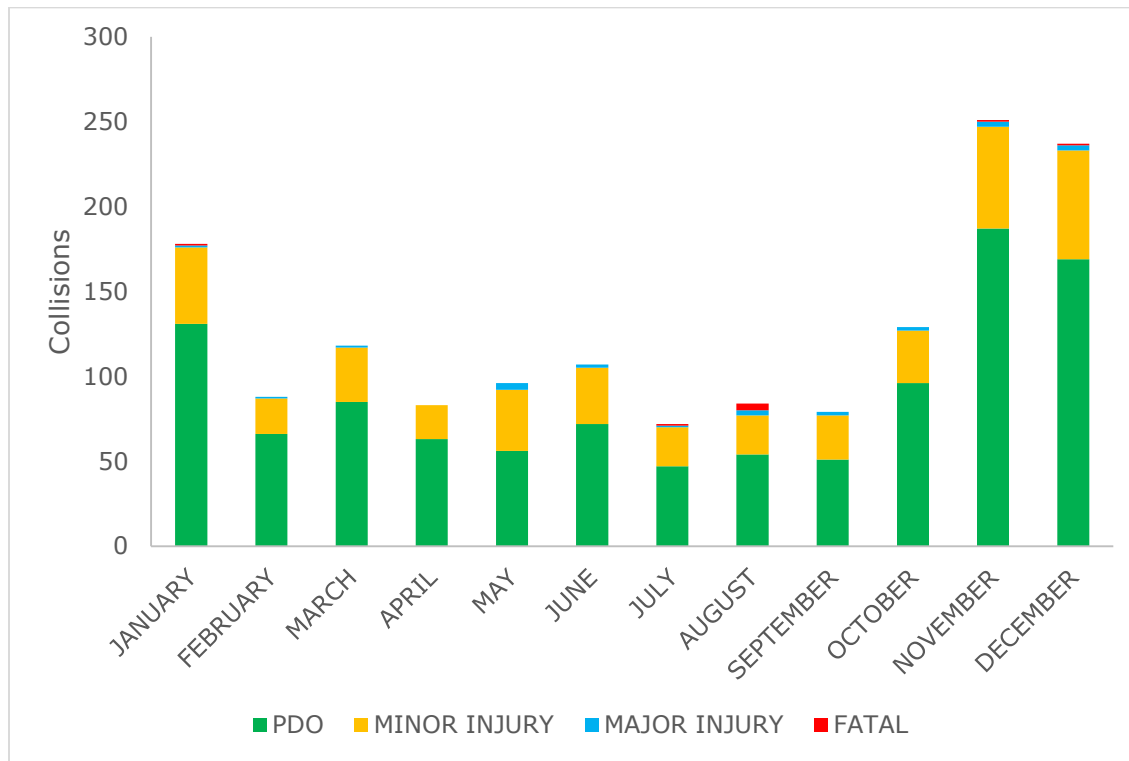
Side Impact (T-Bone, left turn across path, right angle) collisions are the most serious collision type for vehicle occupants, as major injury or death is increasingly likely for speeds greater than 50 km/h. Not surprisingly, the causes of injury collisions were more likely to be 90-degree side impact collisions than those recorded in PDO collisions.

3.5 Temporal Analysis

Monthly

The highest number of fatal and major injury collisions occurred in August, seven in one month. Minor injury and PDO collisions were most common in November and December. Generally, PDO collisions were high in the winter months and lowest in the summer.

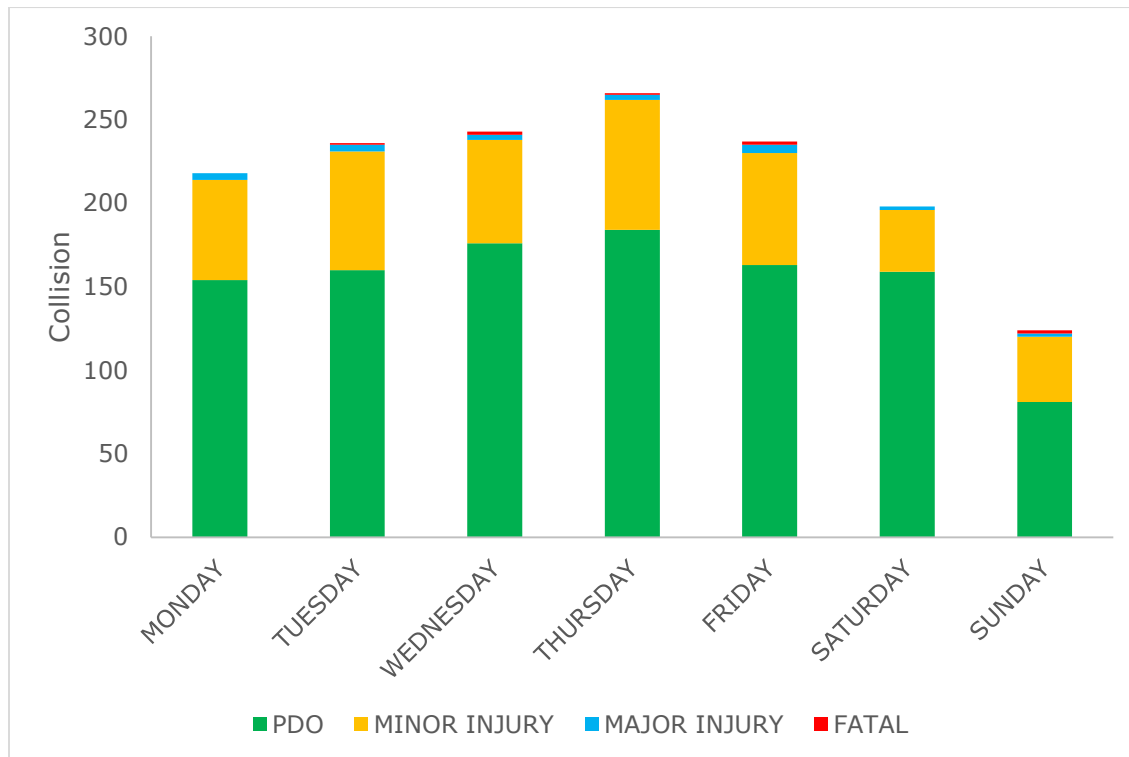
Figure 10: Collisions Severity by Month - 2022



Day of the Week

Friday was the most common day of the week for fatal and major injury collisions in 2022. The highest number of minor injury and PDO collisions occurred during Wednesday and Thursday.

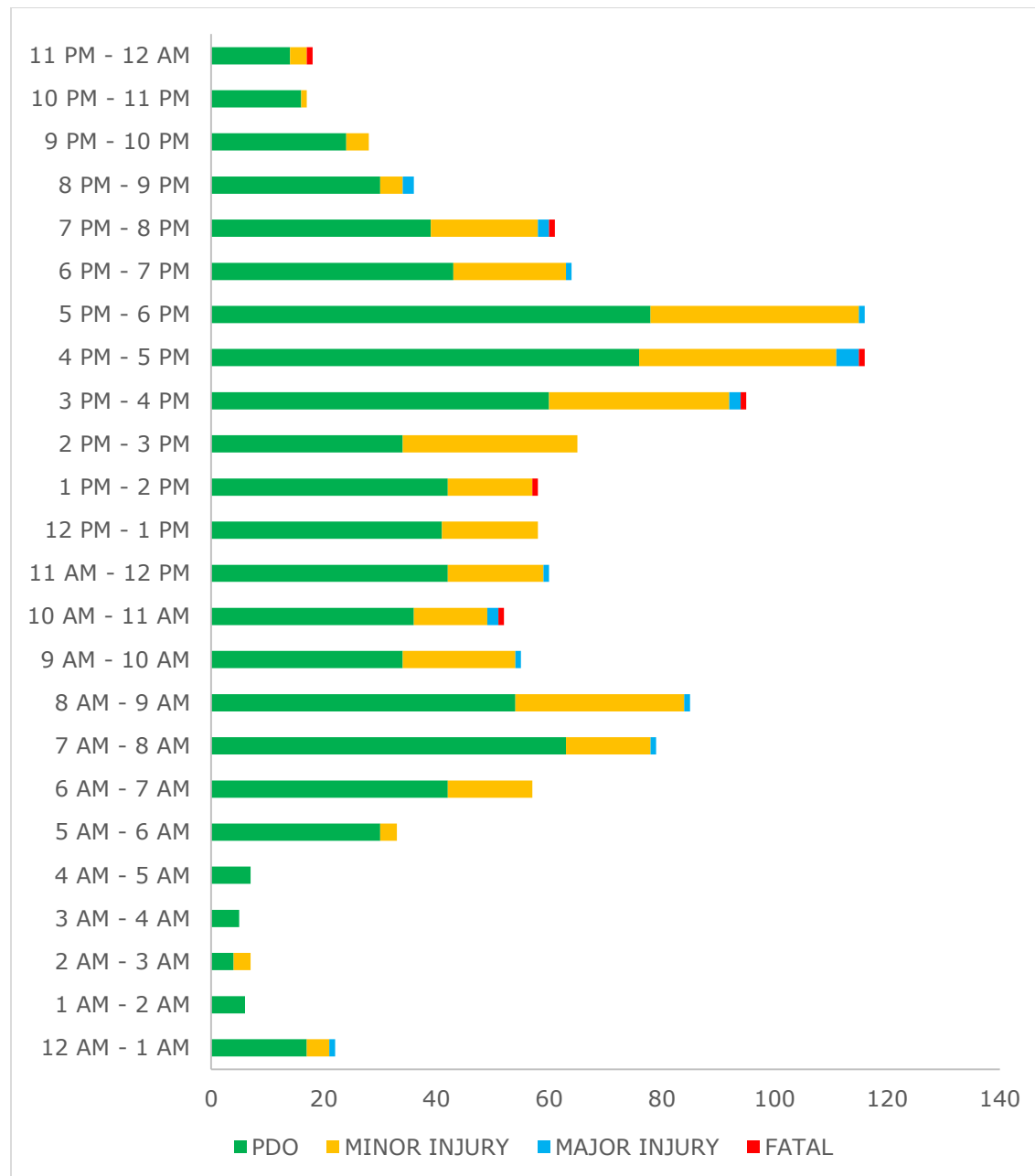
Figure 11: Collision Severity by Day of the Week - 2022



Time of Day

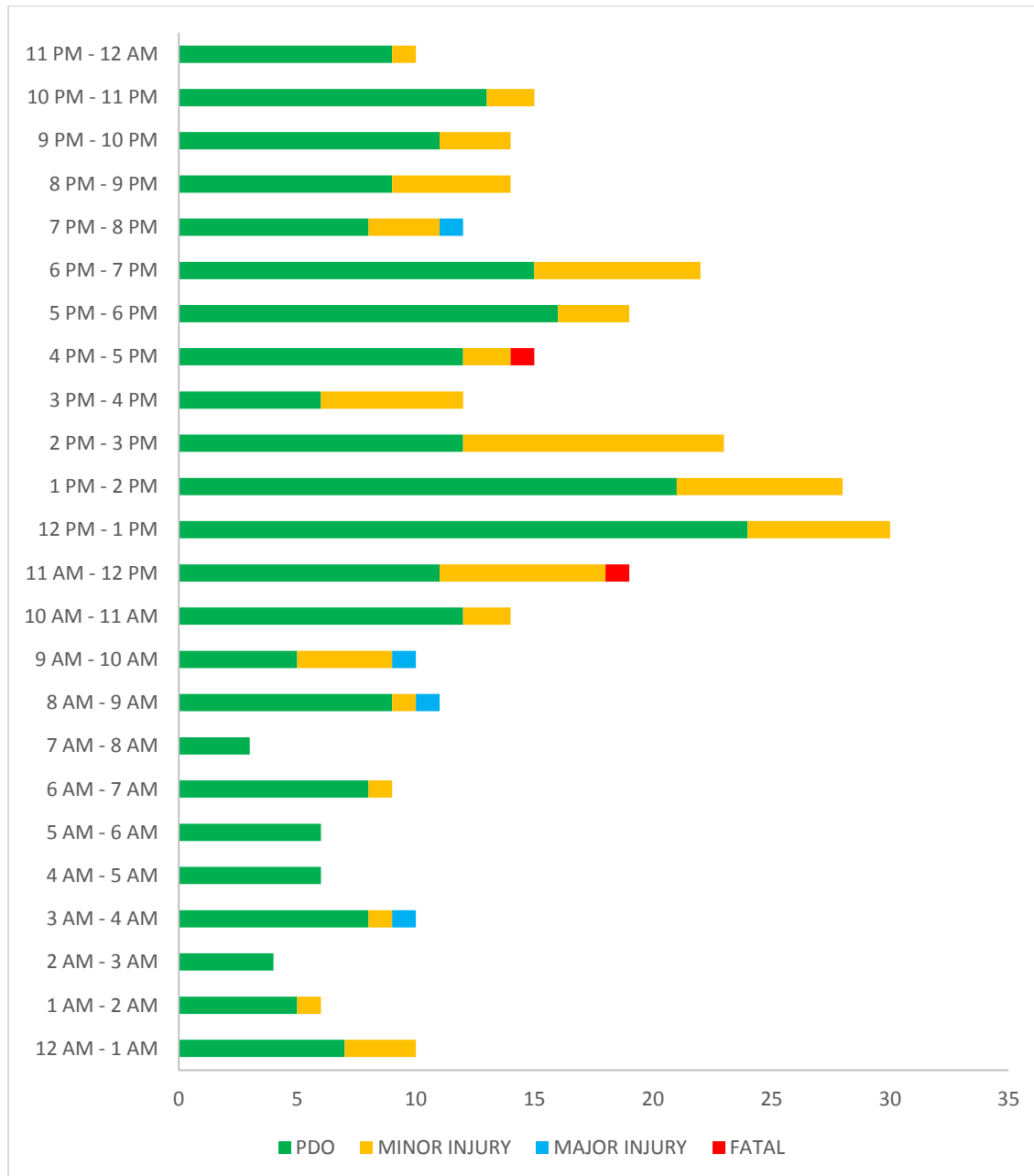
On weekdays, nine out of 25 fatal and major injury collisions happened from 3pm to 6pm, mainly due to higher traffic volumes during evening hours. Minor injury and PDO collisions were highest in the afternoon peak, with a less marked increase during the morning peak hours.

Figure 12: Collisions by Time of Day – 2022 (Weekdays)



On weekends, collisions generally peak around noon and early afternoon. This is most marked with injury collisions, which are most likely to occur between 2:00pm and 3:00pm.

Figure 13: Collisions by Time of Day – 2022 (Weekends)



3.6 Intersection-Related Collisions

In 2022, 52% of the collisions in Strathcona County were intersection related. Six out of eight fatal collisions were intersection related with 13 major injury collisions occurring at non-intersection locations; higher than intersection related. In the minor injury category, more collisions occurred at intersections, while property damage only collisions mostly occurred at non-intersection locations.

Figure 14: Fatal and Major injury collisions - 2022

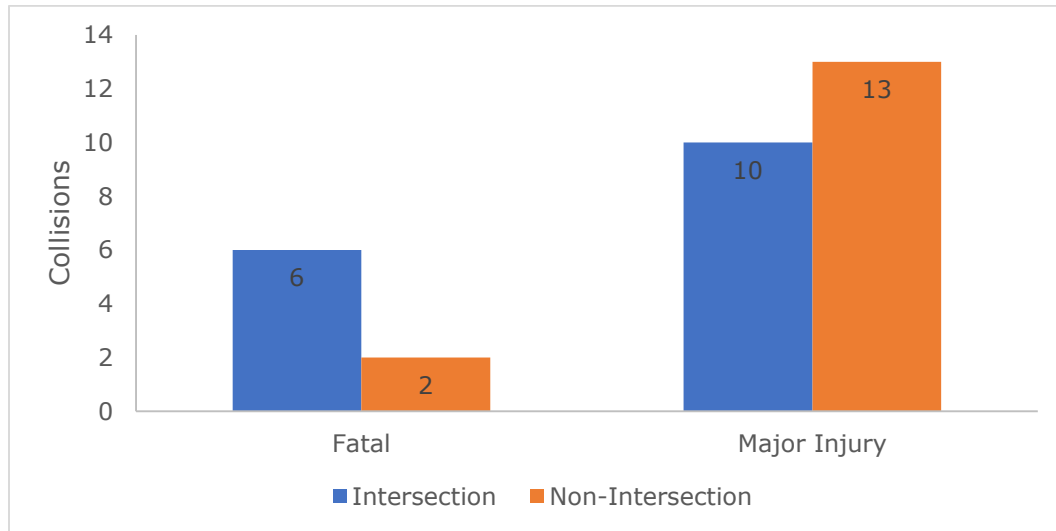
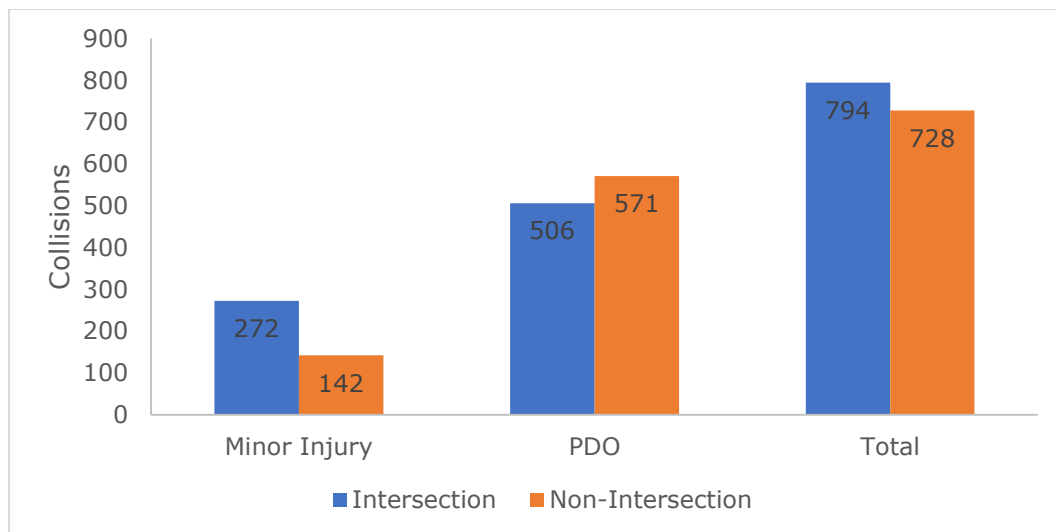


Figure 15: Minor Injury, PDO and Total Collisions - 2022



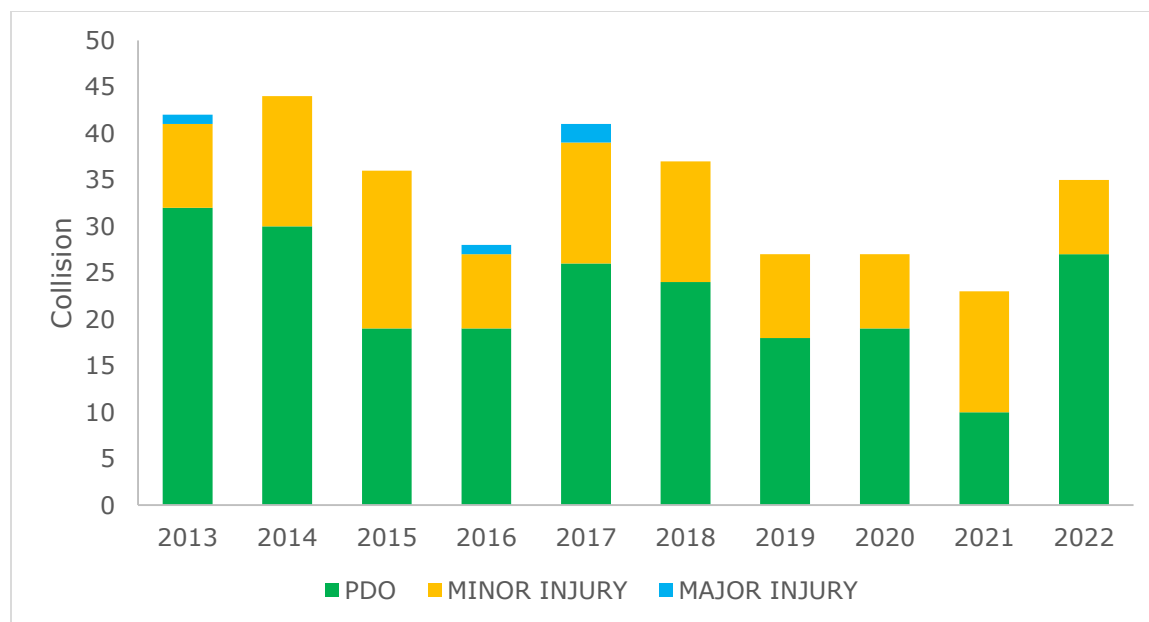
3.6.1 Intersection Rankings by Frequency

Intersections were ranked based on the greatest number of total collisions in last 10 years (2013-2022) collision data. The collisions within 50m of the intersection are considered as intersection-related collisions. The top five intersections in the County are discussed in detail. These intersections also have the highest volumes among other intersections, which is typical for high collision locations.

Rank 1: Baseline Road and Sherwood Drive

This intersection has experienced 340 collisions in the last 10 years. There were four major injury collisions (four major injuries), 112 minor injury collisions (158 minor injuries) and 224 property damage only collisions. Most of the collisions were rear end, averaging at 75% of the total collisions. The over-representation of rear-end collisions may be attributed to slippery road surface conditions, followed to closely and drivers' failure to drive according to the road conditions.

Figure 17: Baseline Road/Sherwood Drive Collision history (2013-2022)

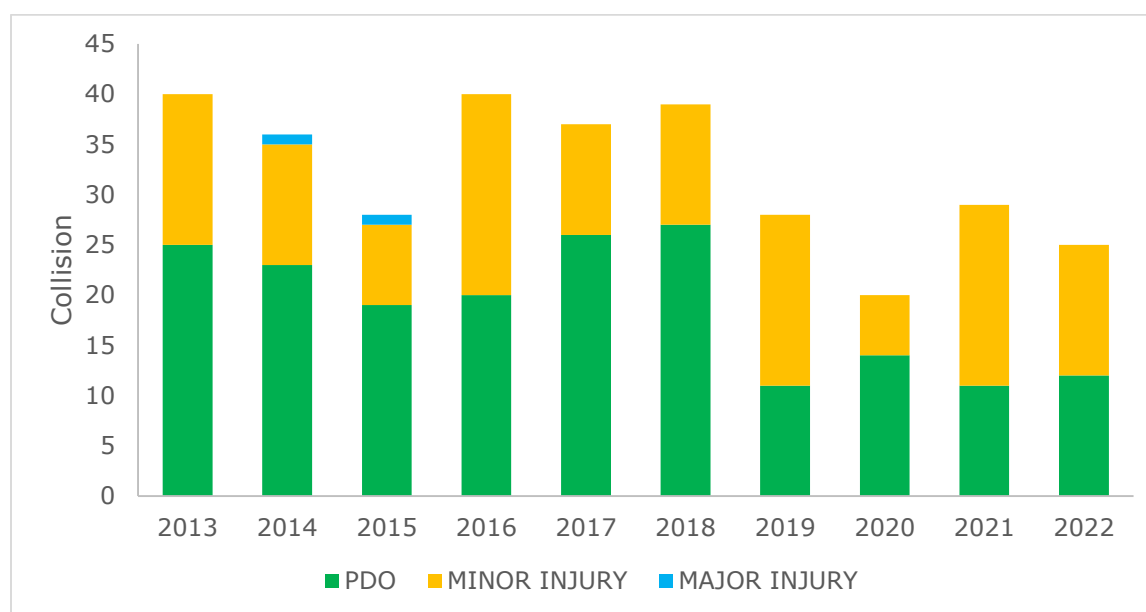


This intersection is the second highest volume location in the County with an average weekday traffic count of 64,200 vehicles per day (2018). From Figure 17, minor injury collisions frequency decreased from 2019 to 2020. This was followed with a substantial increase in 2021 and has since returned to previous levels in 2022.

Rank 2: Baseline Road and Broadmoor Boulevard

This intersection has experienced 322 collisions in last 10 years. There were two major injury collisions (four major injuries), 132 minor injury collisions (175 minor injuries) and 188 property damage only collisions. Like Baseline Road and Sherwood Drive intersection, most of the collisions were rear end, averaging 73% of the total collisions. The over-representation of rear-end collisions may be attributed to slippery road surface conditions, followed to closely and drivers' failure to drive according to the road conditions.

Figure 16: Baseline Road/Broadmoor Boulevard Collision history (2013-2022)



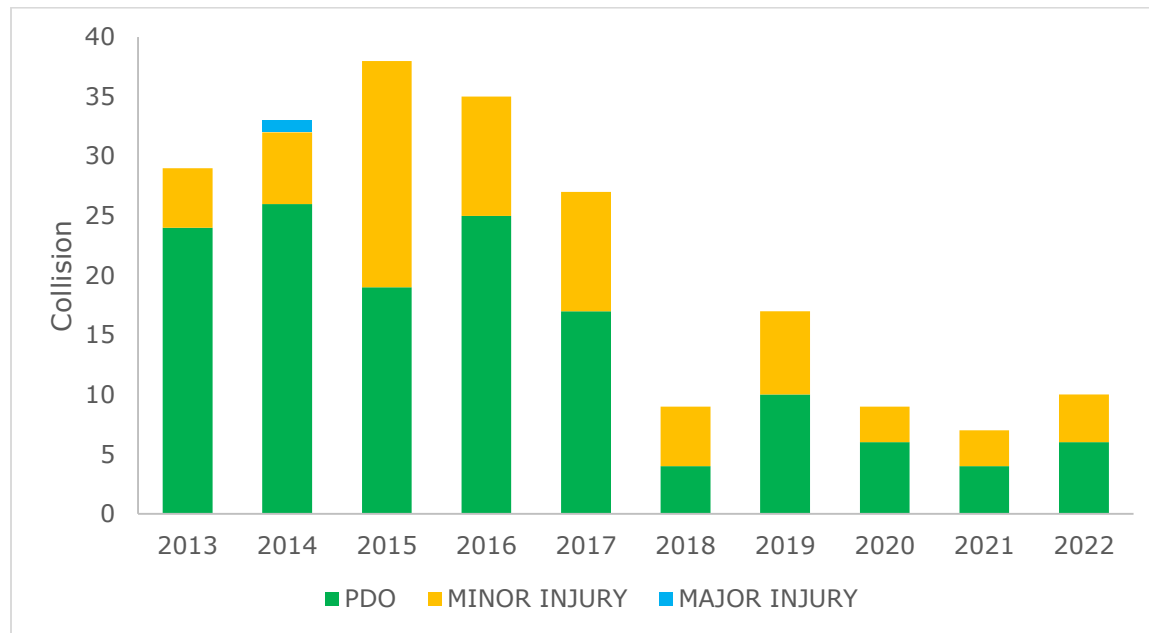
This intersection has the highest traffic volume with 66,200 vehicles per day (average weekday traffic) according to 2018 traffic counts. Figure 16 shows a downward collision trend over the last 10 years. No major injury collisions have been reported since 2016, while minor injury collisions fluctuated slightly during the same time period. In 2022, minor injury collisions decreased from 2021.

Collision data by type shows a significant decrease in the rear end incidents until 2020. These incidents increased in 2021, with similar numbers present in 2022. Slippery road surface condition was the contributor to some collisions. Left turn across path (LTXP) were 12% and sideswipe same direction were 11% of the total collisions being the second and third highest collision type. Unlike rear ends, there is no significant decrease in LTXP until 2019, no LTXP collisions were reported in 2020 and there were two in both 2021 and 2022. Other collision types include struck object and backing; these collisions were low in number and occurred randomly.

Rank 3: Sherwood Drive and Broadmoor Boulevard (Traffic Circle)

This intersection has experienced 214 collisions in last 10 years. There was one major injury collision (one major injury), 72 minor injury collisions (103 minor injuries) and 141 property damage only collisions. The rear end collision average was 57% and sideswipe same direction were 36% of the total collisions.

Figure 18: Sherwood Drive/Broadmoor Boulevard Collision history (2013-2022)



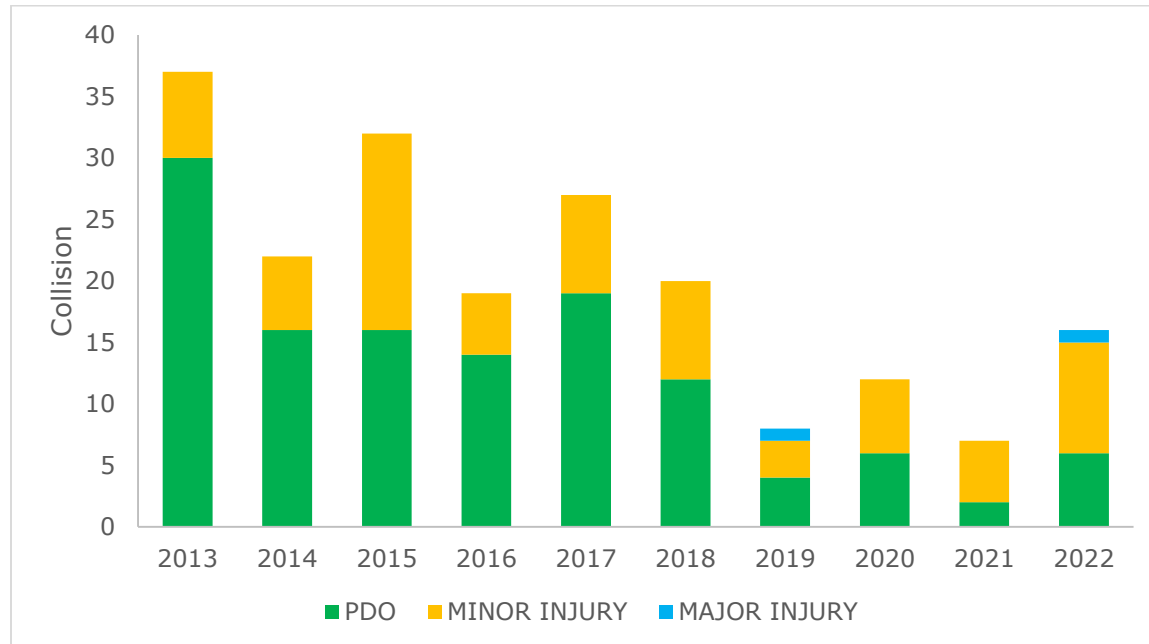
Average weekday traffic is 28,400 vehicles per day. Figure 18 shows a decreasing trend in the frequency of overall collisions. There have been no major injury collisions at this location since 2014. Property damage only collisions have dropped significantly with the implementation of geometric changes. Minor injury collision frequency has also declined significantly with the implementation of geometric changes.

The frequency of sideswipe same direction collisions has also dropped since the changes were made to the traffic circle in 2016. Rear end collisions at the roundabout entry points are now the most common cause of collision at this location, with followed too closely as the contributing factor to many collisions.

Rank 4: Baseline Road and Clover Bar Road

This intersection has experienced 200 collisions in last 10 years. There were two major injury collisions (four major injuries) at this location, one in 2019 and one in 2022, 73 minor injury collisions (96 minor injuries) and 125 property damage only collisions. Rear end collisions account for an average of 63%, LTXP for 11% and right-angle collision were 6% of the total collisions.

Figure 19: Baseline Road/Clover Bar Road Collision history (2013-2023)



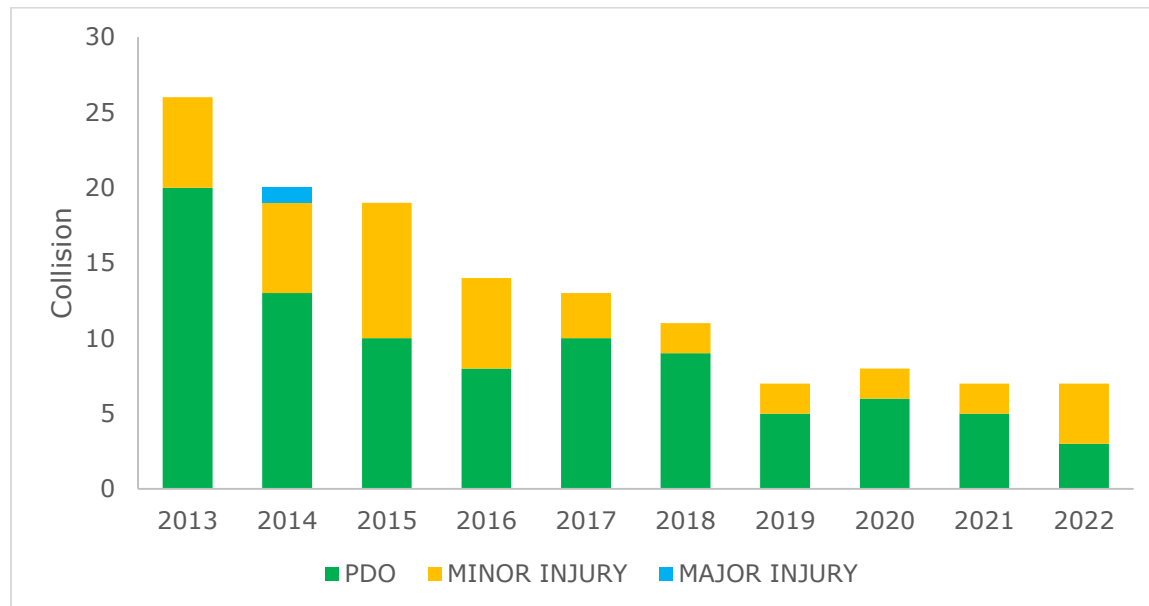
This intersection is also the fourth highest traffic volume location in the County with average weekday traffic of 47,200 vehicles per day (2018). Figure 19 shows a decreasing trend in the frequency of overall collisions. Both the minor injury and property damage only collision dropped recent years, but there is slight increase in 2022.

The decrease in overall collision frequency is due to a decrease in rear end and LTXP collisions which are a direct result of traffic signal phase changes and intersection upgrades with improved geometry of left turn lanes.

Rank 5: Wye Road and Sherwood Drive

This intersection has experienced 132 collisions in last 10 years. There was one major injury collision (one major injury) at this location in 2014, 42 minor injury collisions (63 minor injuries) and 89 property damage only collisions. Rear end collisions account for an average of 43% and LTXP for 17% of the total collisions.

Figure 20: Wye Road/Sherwood Drive Collision history (2013-2022)



This intersection is the third highest traffic volume location in the County with average weekday traffic of 50,300 vehicles per day (2018). Figure 20 shows a decreasing trend in the frequency of overall collisions. Both the minor injury and property damage only collisions have declined over recent years.

The overrepresentation of LTXP collisions was mainly due the unprotected left turn movements for westbound traffic and drivers' misjudgment of safe gaps. Left turn across path have dropped significantly since 2012 when the traffic signal phase changes were made, 3 LTXP collisions occurred in 2022. Rear end collisions have also experienced a decreasing trend since 2013.

3.7 Neighbourhood Collisions

According to the County's street network, collector and local roads serve neighbourhoods. There were no fatal and no major injury collisions on the residential collector or local road network in 2022. Struck object and backing were the main collision types on neighbourhood roads, resulting mainly in property damage only collisions. Struck object includes drivers' failing to drive according to the road conditions, losing control and colliding with parked vehicles and other road objects such as curbs, medians, corner islands, etc.

Table 10 shows the location of fatal and major injury collisions. The majority of the collisions were on highways in both 2021 and 2022.

Table 10: Major Injury and Fatal Collisions 2021/2022 by location

Road Type	2021		2022	
	Fatal	Major	Fatal	Major
Collector	0	1	0	1
Arterials	0	5	0	8
Highways	3	4	8	14

3.8 Wildlife Collisions

In 2022, 16% of all reported collisions were wildlife related. Most wildlife collisions are not serious for vehicle occupants, with 90% of those reported causing only property damage. Overall, there was a 20% increase in the number of wildlife collisions from 2021 to 2022. Two wildlife major injury collisions occurred in 2022, One occurred when a vehicle struck a moose and the other one when a vehicle struck a deer. Both occurred on provincial highways. Deer related collisions accounted for 73% of the total wildlife related collisions followed by moose at 12%.

Table 11: 2021/2022 Wildlife Collisions in Strathcona County

Severity	2021	2022	Change
Fatal	0	0	-
Major Injury	1	2	1 ▲
Minor Injury	21	23	2 ▲
PDO	178	214	36 ▲
Total	200	239	39 ▲

Table 12: Wildlife Collision by Type

Animal type	Fatal	Major	Minor	PDO	Total
Deer	0	1	16	174	191
Moose	0	1	6	28	35
Coyote	0	0	0	4	4
Goose	0	0	0	2	2
Dog	0	0	1	3	4
Rabbit	0	0	0	1	1
Other	0	0	0	2	2

3.9 Demographics

Individuals aged 35-44 were the most likely to be injured in a motor vehicle collision in 2022. Of the 11 fatalities, three drivers were 65 years or older, one motorcyclist, and two drivers were under the age of 25 years.

Table 13: Fatalities and Injuries as a Result of 2022 Collisions by Age

Age Group	Fatal	Major	Minor	Total
0-5	0	0	0	0
6-11	0	1	0	1
12-15	0	0	5	5
16-18	0	1	39	40
19-24	2	2	46	50
25-34	0	1	98	99
35-44	3	5	93	101
45-54	0	2	75	77
55-64	0	5	63	68
65-74	2	3	38	43
75+	1	3	18	22
Unknown	3	5	114	122
Total	11	28	589	628

11 fatalities include nine male drivers, one female driver, and one female passenger.

Table 14: Fatalities and Injuries as a result of 2022 collisions by gender

Gender	Fatal	Major	Minor	Total
Female	2	8	317	327
Male	9	20	272	301

3.10 Vulnerable Road User Collisions

3.10.1 Pedestrian Collisions

There was a total of seven pedestrian collisions in Strathcona County in 2022, resulting in six minor injuries and one major injury. Four collisions occurred at intersections and three occurred at midblock locations. There was a 22% decrease in collision frequency from 2021 to 2022.

Table 15: Pedestrian Collisions 2021 and 2022 by Severity

Severity	2021	2022	Change
Fatal	1	0	1 ▼
Major	0	1	1 ▲
Minor	8	6	1 ▼
PDO	0	0	-
Total	9	7	2 ▼

The only major injury collision occurred at an arterial intersection when a pedestrian crossed without the right of way and was struck by an oncoming vehicle. Of the minor injury pedestrian collisions, one occurred on a highway, one on an arterial road, and four were on collector roads.

Table 16: Location of Pedestrian Collisions – 2022

Severity	Highway	Arterial	Collector	
			Residential	Non-Residential
Fatal	0	0	0	0
Major	0	1	0	0
Minor	1	1	1	3
PDO	0	0	0	0
Total	1	2	1	3

Four out of seven pedestrians were females, and three were males. Three were under 18 years of age and two were over 65 years of age.

Table 17: Minor injuries as a Result Pedestrian Collisions by Age and Gender – 2022

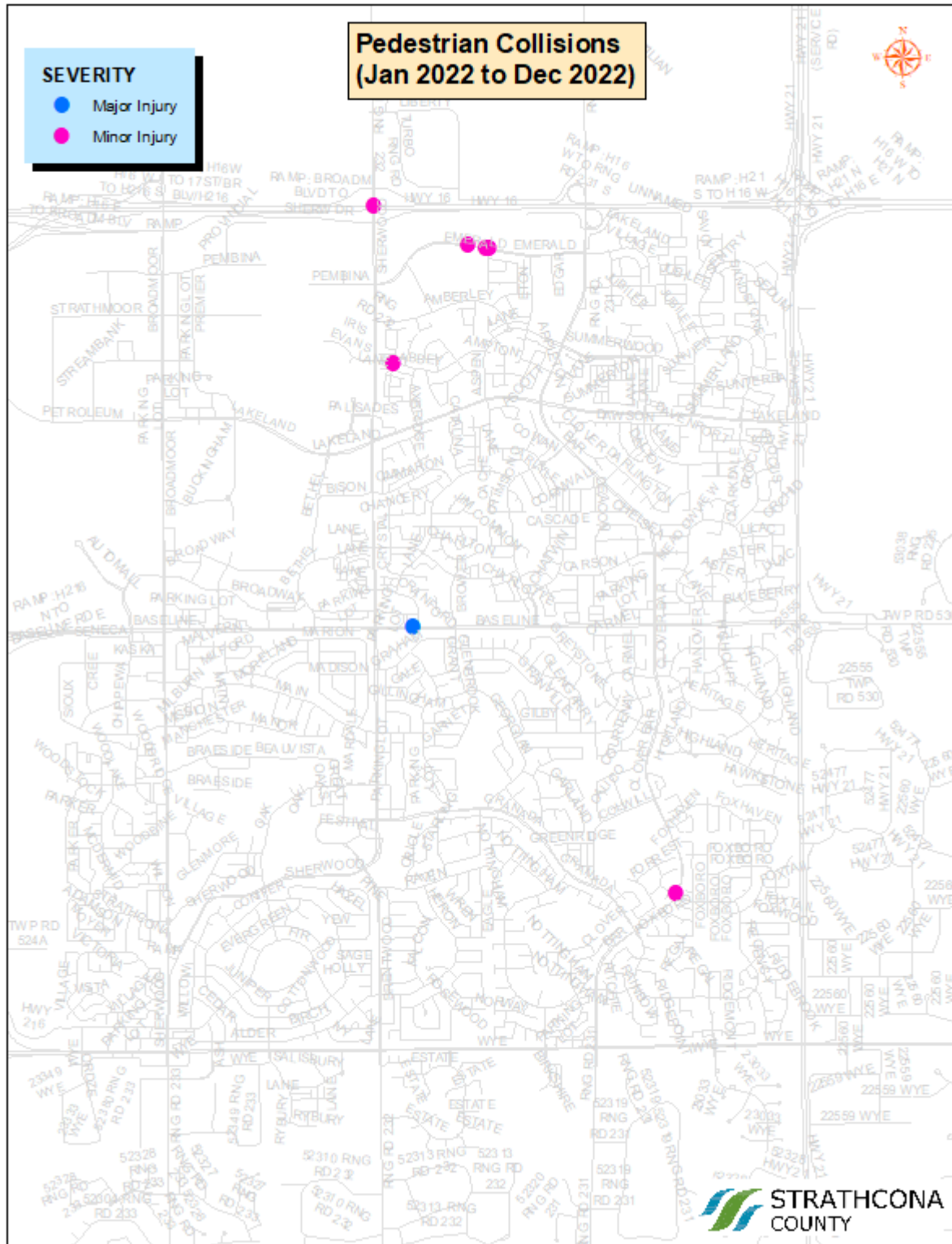
Number	Age	Gender	Severity	Location
1	7	F	Major	Arterial
2	15	F	Minor	Collector
3	17	M	Minor	Collector
4	24	M	Minor	Highway
5	28	F	Minor	Collector
6	68	F	Minor	Collector
7	70	M	Minor	Arterial

Out of seven pedestrian collisions, five drivers were at fault, one driver failed to yield to the pedestrian in a crosswalk. The drivers' prior action was unknown for three collisions. The following table describe the driver actions that caused the collision.

Table 18: Drivers' Prior Actions – 2022 Pedestrian Collisions

Prior Action	Fatal	Major	Minor	Total
Driving Properly (not at fault)	0	1	1	2
Failed to Yield Pedestrian ROW*	0	0	5	5

* Right of Way



3.10.2 Bicycle Collisions

There was a total of six bicycle collisions reported in Strathcona County in 2022, resulting in five minor injuries. Four less bicycle collisions occurred in 2022 compared with 2021. There were no fatal or major injury collision occurred in 2022.

Table 19: Bicycle Collisions 2021/2022 by Severity

Severity	2021	2022	Change
Fatal	0	0	-
Major Injury	0	0	-
Minor Injury	9	5	4 ▼
PDO	1	1	-
Total	10	6	4 ▼

Three bicycle collisions took place on arterial roads, two on non-residential collectors, and one on a residential collector road.

Table 20: Location of Bicycle Collisions - 2022

Severity	Arterial	Non-Residential Collector	Residential Collector/Local
Fatal	0	0	0
Major	0	0	0
Minor	2	2	1
PDO	1	0	0
Total	3	2	1

All bicycle collisions that occurred in 2022 were on urban roads. Failed to yield to pedestrians was the prior driver action in all bicycle collisions. The drivers' actions prior to the collision are summarized in Table 21.

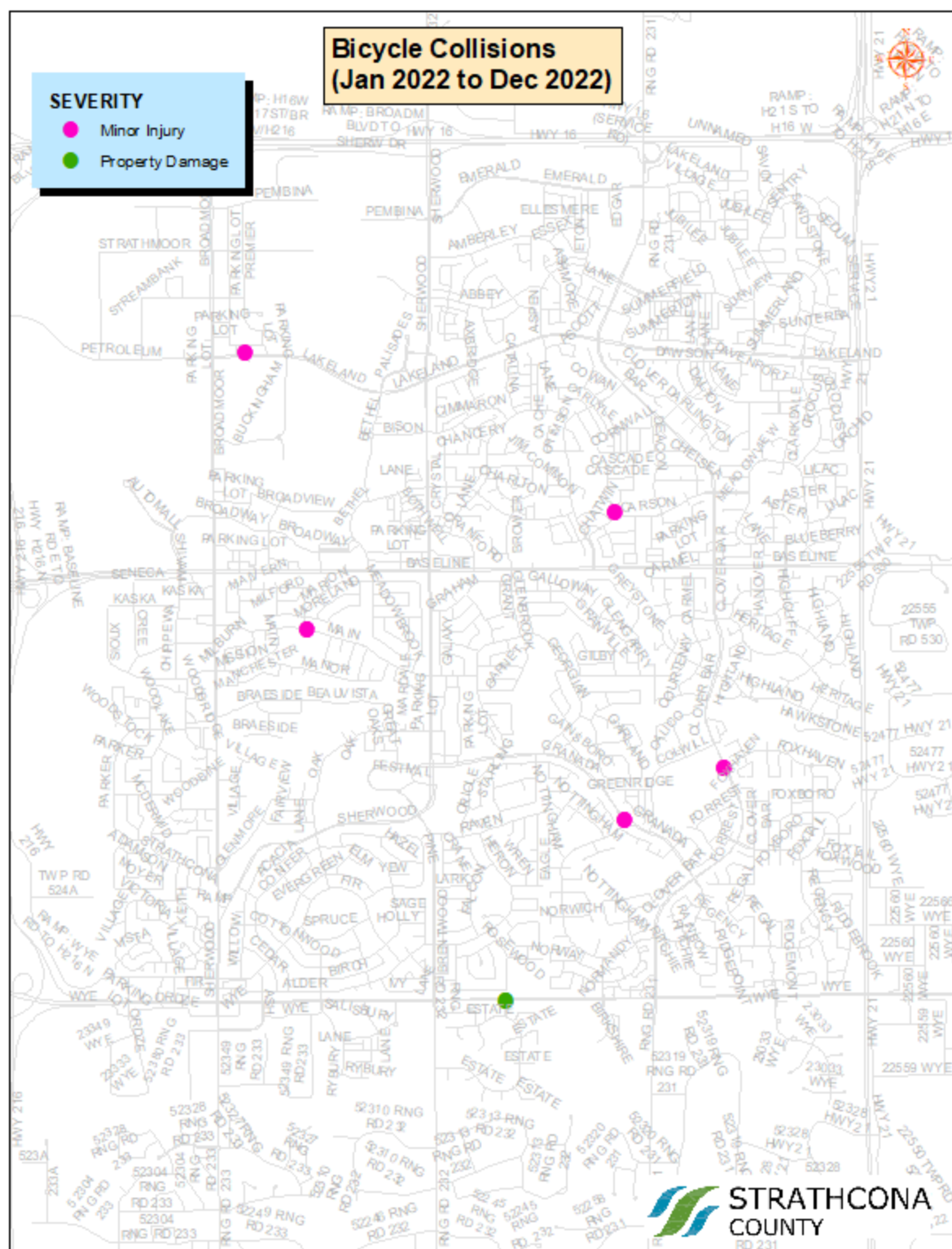
Table 21: Motor Vehicle Drivers' Prior Actions – 2022 Bicycle Collisions

Prior Action	Major	Minor	PDO	Total
Driving Properly (not at fault)	0	0	0	0
Failed to Yield	0	6	0	6

Cyclist collisions involved five males and one female. Four out of six were 18 years of age or under, the remaining cyclists were adults.

Table 22: Minor injuries as a Result of 2022 Bicycle Collisions by Age and Gender

Number	Age	Gender	Severity	Location
1	14	M	Minor	Collector
2	14	M	Minor	Collector
3	16	M	Minor	Collector
4	17	F	Minor	Arterial
5	33	M	None	Arterial
6	63	M	Minor	Arterial



3.10.3 Motorcyclist Collisions

There was a total of 10 motorcycle collisions in Strathcona County in 2022. These collisions resulted in three fatalities, two major injuries and 10 minor injuries. Two fatal, one major injury and one minor injury collision occurred on provincial highways, the remaining occurred on County roads.

Table 23: Motorcycle Collisions 2021/2022 by Severity

Severity	2021	2022	Change
Fatal	0	2	2 ▲
Major	1	2	1 ▲
Minor	5	6	1 ▲
PDO	1	0	1 ▼
Total	7	10	3 ▲

Based on collision history, unsafe driving was a major factor in motorcycle collisions, resulting in one major and three minor injury collisions. One collision occurred when a motorcyclist was avoiding an animal and four collisions occurred when the motorcyclists were driving properly. See below table summarizing prior actions of motorcyclists.

Table 24: Prior actions of Motorcyclist contributing to collisions – 2022

Prior Action	Fatal	Major	Minor	PDO	Total
Avoiding animal	0	0	1	0	1
Stop sign violation	0	1	0	0	1
Unsafe driving	0	1	3	0	4
No action	0	0	4	0	4

3.11 Commercial Vehicle Collisions

Commercial vehicles include trucks >4500 kg, buses, and tractor trailers. Three out of total 11 fatal collisions involved a commercial vehicle. Overall, the number of collisions involving a commercial vehicles increased by 60%, which may be due to additional traffic on roads post pandemic, however, it is difficult to know for sure.

Table 25: Commercial Vehicle Collisions 2021/2022 by Severity

Severity	2021	2022	Change
Fatal	1	3	2 ▲
Major	1	3	2 ▲
Minor	19	27	8 ▲
PDO	45	73	28 ▲
Total	66	106	40 ▲

3.12 Impaired Driving Collisions

Alcohol was a contributing factor in 22 collisions in 2022, including one fatal, one major and four minor injury collisions. Overall, the number of collisions involving an impaired road user decreased by 44% when compared to 2021.

Table 26: Alcohol related collisions 2021/2022 by Severity

Severity	2021	2022	Change
Fatal	0	1	1 ▲
Major	1	1	-
Minor	14	4	10 ▼
PDO	24	16	8 ▼
Total	39	22	17 ▼

3.13 Private Property Collisions

So far, the analysis has only considered collisions on public roads. However, approximately 26% of total reported collisions are on private property, including parking lots. There were 524 collisions in 2022, including 30 minor injury collisions on private property. Most private property collisions result in PDO, suggesting that they occurred at low speeds. Of note, pedestrian collisions that occurred on public roads are similar to the parking lot collisions. This statistic suggests the need for improved standards of pedestrian facilities in parking lots within development areas. Most of the collisions were due to unsafe backing of vehicles.

Table 27: Private property collisions 2021/2022

Severity	2021	2022	Change
Fatal	0	0	-
Major	1	0	1 ▼
Minor	22	30	8 ▲
PDO	405	493	88 ▲
Total	428	524	96 ▲
Pedestrian	8	8	-

4.0 Appendix- Glossary of Terms

Definitions of terms used in this report:

Rear-end

Two vehicles in a position of one behind the other and collide, regardless of what movement(s) either vehicle was in the process of making except for one or both vehicles backing.

Sideswipe - Same Direction

Two vehicles moving alongside each other and collide, with at least one of the vehicles being struck on the side. This type would include a collision resulting from one of the vehicles making an improper turn such as a left from the right lane or vice-versa or turning right from the appropriate outside lane and striking a vehicle passing on the right shoulder.

Right Angle

Two vehicles approaching from non-opposing angular directions collide, typically resulting as one vehicle failed to either stop or yield right of way from a Stop or Yield sign, ran a red light, or was not cleared from the intersection upon the onset of the conflicting movement's green signal.

Head-on

Two vehicles approaching opposite directions and intending to continue in opposite directions collide in a frontal or angular manner as a result of one or both vehicles crossing the painted or unpainted centerline or divided median of the roadway. This includes a collision resulting from one vehicle traveling the wrong way down a divided highway.

Sideswipe – Opposite Direction

Two vehicles approaching opposite directions and intending to continue in opposite directions collide in a sideswiping manner as a result of one or both vehicles crossing the painted or unpainted centerline or divided median of the roadway. This also includes a collision resulting from one vehicle traveling the wrong way down a divided highway.

Left Turn Across Path

Two vehicles approaching from opposite directions collide as a result of at least one vehicle attempting to make a left or U turn in front of the opposing vehicle.

Backing

Any multi-vehicle collision when at least one vehicle was in the act of backing up.

Rollover

A collision in which a vehicle rolls over on or off the roadway without first having been involved in some other type single or multiple vehicle collision. This includes motorcycle collision in which the operator loses control of and drops bike, but had not initially struck another motor vehicle, fixed or non-fixed object, animal, cyclist, or pedestrian.

Struck Object

A single vehicle in collision with a fixed or moveable object on the road surface. i.e. rocks, animals, pedestrians, powerlines or overpass structure. This configuration can also be used for non-collision events such as fires/explosions and rollovers where the vehicle did not leave the road surface.

Wildlife

A collision involving a vehicle striking wildlife, such as a deer.

Pedestrian

A collision involving a vehicle and pedestrian in which the collision between the two is the primary event and took place within the road. This type includes a vehicle colliding with someone walking their bicycle.

Bicyclist

A collision involving a vehicle and a bicycle that is in the act of being ridden or stopped in the roadway, but currently mounted by the cyclist.

Minor Injury

Any injuries such as bruises, abrasions, limping, etc., whether visible or self-reported.

Major Injury

A person(s) was admitted to the hospital because of injuries sustained in the collision.

Fatal Collision

A traffic collision that results in one or more fatalities within thirty days of the collision.

PDO

Property damage only collision.

Vulnerable Road User

Road users who are in an unprotected state or have less external protection, i.e., pedestrian, motorcyclist, or bicyclist.

Vulnerable Road User Collision

A collision involving a vehicle that collides with either a pedestrian, motorcyclist, or bicyclist.