STRATHCONA COUNTY

Traffic Collision Statistics Report

2018

Prepared by
Tahir Hameed, M.Eng, P.Eng, PTOE
Traffic Safety Engineer

Transportation Planning and Engineering Department
Strathcona County

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As a Result of Collisions in 2018:

6
People
Lost Their Lives

5 Driver

1 Passengers

33
People Sustained Major
Injuries Requiring Hospitalization

14 Drivers

8 Passengers

4 Motorcyclists

7 Cyclists

719
people sustained minor
injuries

The estimated direct cost of collisions in 2018 in Strathcona County was

$50 Million

2018 collision quick facts

- 1,913 collisions occurred on public roadways; 34% of these collisions happened on provincial highways.
- All five fatal collisions occurred on highways
- 529 injury collisions occurred on public roadways; these resulted in 33 major injuries requiring hospitalization and 719 minor injuries to road users
- individuals aged 25-35 were the most likely to be injured in a collision.
- no major injury collision occurred on residential roads in 2018
- 41% of all collisions occurred at intersections
- rear end was the most common type of collision in 2018
- the highest number of fatal, injury and property damage only collisions took place in November.
- collision primetime is Friday between 5:00 and 6:00 pm.
- 14% of all reported collisions were animal related.

Collision comparisons from 2017 to 2018

Statistic	2017	2018	% Change
All roads within County			
➢ total collisions	2168	1913	-11.76
➢ fatal collisions	6	5	-16.67
➢ major injury collisions	49	21	-57.14
➢ minor injury collisions	467	508	+8.
➢ PDO collisions	1646	1379	-16.22
➢ collisions per 1,000 population	22.07	19.45	-11.87
➢ injury collisions* per 1,000 population	5.32	5.43	+2.07
➢ collision injuries*	710	758	6.76
➢ collision injuries* per 1,000 population	7.23	7.70	+6.50
➢ pedestrian collisions	25	21	-16.00
➢ fatal and major pedestrian injuries	6	0	-100.00
➢ bicycle collisions	11	7	-36.36
➢ fatal and major cyclist injuries	1	3	+200.00
➢ motorcycle collisions	24	22	-8.33
➢ fatal and major motorcyclist injuries	12	6	-50.00
➢ intersection collisions	1030	779	-24.37
➢ animal collisions	337	269	-20.18
➢ alcohol related collisions	73	55	-24.66
➢ commercial vehicle collisions	124	136	9.68
County owned roads			
➢ total collisions	1460	1259	-15.97
➢ fatal collisions	2	0	-100
➢ major injury collisions	26	10	-61.53
➢ minor injury collisions	333	343	+3.00
➢ PDO collisions	1099	906	-17.56
➢ injury collisions* per 1,000 population	3.68	3.59	-2.45

*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, 2018 to December 31, 2018 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 CAD $2,000 or greater since 2011, and CAD $1000 prior to 2011, as well as any collision that results in a major or minor injury or fatality.

The information presented in this report is based upon reportable incidents at the time of printing. Due to continuing police investigations, some numbers presented in this report may be subject to revision.

Significance of collisions statistics

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 all of the 5 E's of traffic safety: engineering, enforcement, education, evaluation and engagement. Some of the major tasks are:

- 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, pedestrians, bicyclists, motorcyclists, and commercial vehicles;
- facilitating budget planning;
- determining collision reduction targets and monitoring our progress towards 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 98,000 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 km^2, with a variety of land uses.

Table 1: Land use by area in Strathcona County

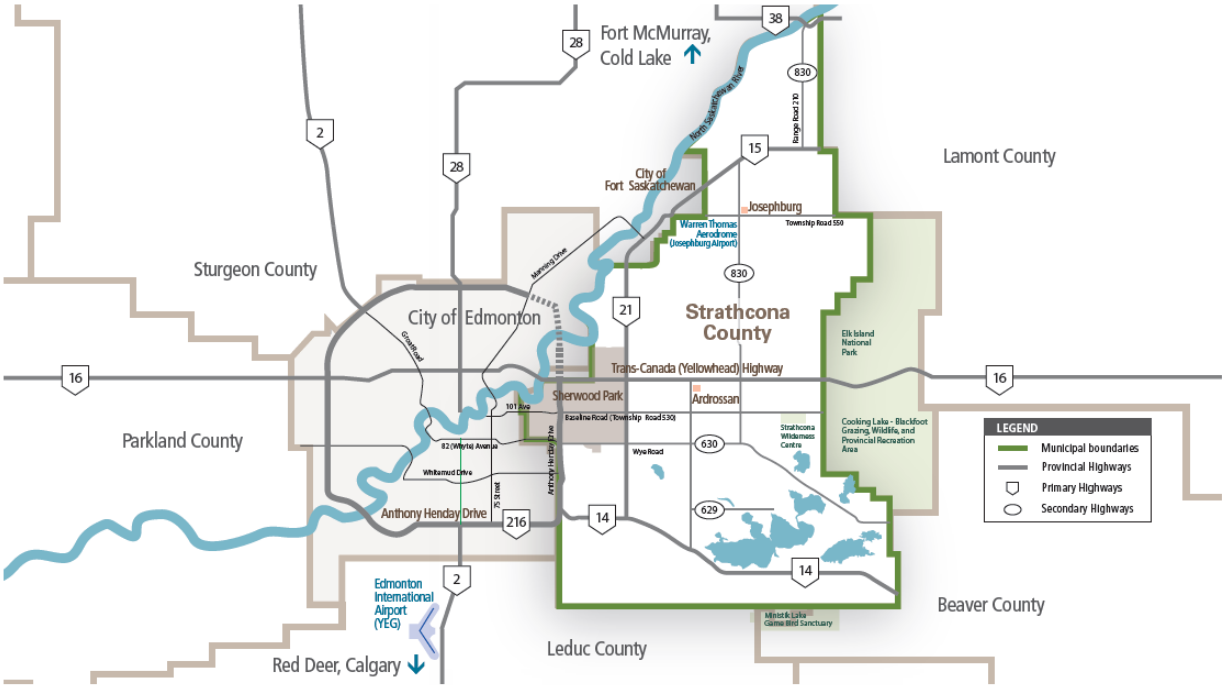
Agricultural	87,502 hectares
Industrial	9,052 hectares
Commercial	2,078 hectares
Residential	18,542 hectares
Urban village*	66 hectares
Park/recreation/natural	3,701 hectares
Other: airports, water bodies, roads, road rights-of-way	5,679 hectares

* 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



1.2.2 Roadway Network

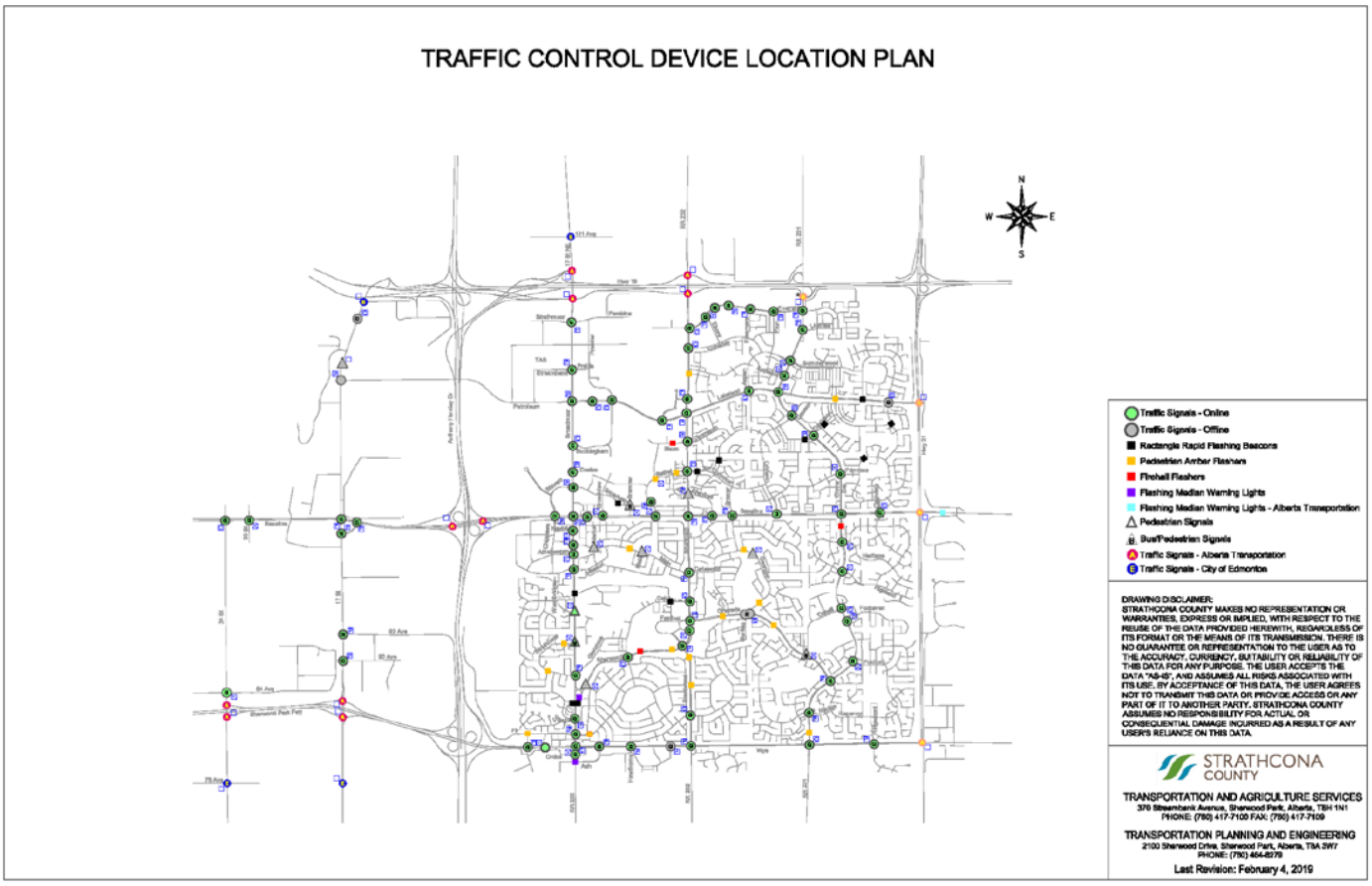
There are 1,943 km of public roadways in Strathcona County, including:

- 232 km of Provincially-maintained highways;
- 403 km of County-maintained urban roads;
- 1,308 km County-maintained rural roads.

1.2.3 Traffic Signals

Strathcona County operates approximately 115 signalized devices. There are also four signals operated by the City of Edmonton on our western border. In addition, signals on provincial highways are operated by Alberta Transportation.

Figure 2: Urban traffic signal locations



1.2.4 Demographic Information

Population

Strathcona County is a fast growing community, experiencing a 19.2% population increase between 2006 and 2018. The majority of this growth has taken place in Sherwood Park, which has grown by 25% during this timeframe.

Table 2: Strathcona County population (2006-2018)

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

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

Age

According to the 2018 Strathcona County Census, the average age of Urban Service Area residents is 39.8, and rural service area is 41.3 years. These averages are higher than Alberta average of 37.8, but lower than the Canadian average of 41.0.

Table 3: Strathcona County Population Breakdown by Age (from 2018 Strathcona County Census data)

Age Group	Percent of Population
14 and under	17.7
15-19	7.1
20-34	16.1
35-44	13.5
45-64	29.5
65 and older	16.1
Total Population (All Ages)	100

Strathcona County has 1% less seniors and 1.5% 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 County residents vs Alberta and Canada

Main Mode of Commuting	Strathcona County*	Alberta*	Canada*
Car, truck, van- as driver	87.5	77.7	74.0
Car, truck, van- as passenger	4.0	5.2	5.5
Public Transit	4.5	10.0	12.4
Walk	2.0	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, Sherwood Park had 71,364[1] licensed drivers in 2018. No data is available for Strathcona County, but given that this number exceeds the population of Sherwood Park, it likely reflects all or most of the County.

Similarly, Alberta Transportation reports there are 83,827[2] motorized vehicles for highway use registered in Sherwood Park. This amounts to 1.2 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.

A school zone has a black and white 30 km/h sign attached below the green school sign. As of September 2018, the school zone speed limit is 30 km/h and is in effect the from 7:30am to 4:30pm on school days. Prior to September 2018, school zones were in effect as per the Alberta Traffic Safety Act.

[1] https://www.transportation.alberta.ca/Content/docType47/Production/Drivers2018.pdf
[2] https://www.transportation.alberta.ca/Content/docType47/Production/VehReg2018.pdf

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

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 slightly despite significant population growth. Total collision rate and property damage only (PDO) collision rate are down significantly between 2009-2018 (31% and 38% respectively). In 2011, the minimum for collision reporting increased from $1000 to $2000, which likely accounts for at least part of this decrease.

In the last 10 years the rate of minor injury collisions has no significant change and varies every year, increased by 11% compared to 2017. The frequency of major injury collisions had an increasing trend from 2015-2017, but dropped in 2018. Fatal collision rates are very low and do not lend themselves to comparison.

Table 5: All collisions by consequence within County borders 2009-2018

Year	Fatal	Major*	Minor**	PDO***	Total
2009	5	44	448	1972	2469
2010	3	26	390	1830	2249
2011	8	32	418	1667	2125
2012	7	34	367	1746	2154
2013	5	27	425	1766	2223
2014	5	33	443	1843	2323
2015	5	59	537	1808	2409
2016	5	60	498	1615	2178
2017	6	49	467	1646	2168
2018	5	21	508	1379	1913

*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

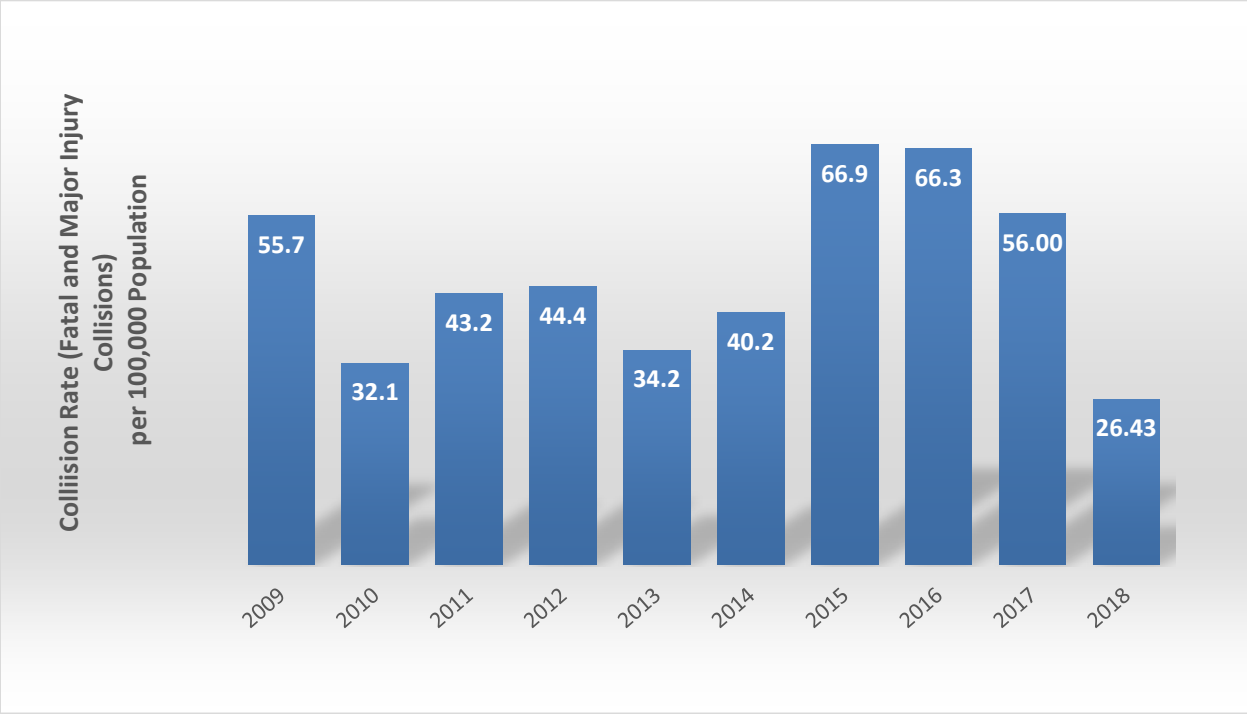
Year	Fatal	Major*	Minor**	PDO***	Total
2009	5.68	50.0	509.1	2241.0	2805.7
2010	3.32	28.8	432.2	2027.8	2492.1
2011	8.65	34.6	451.9	1802.4	2297.5
2012	7.58	36.8	397.2	1889.5	2331.1
2013	5.35	28.9	454.7	1889.4	2378.4

2014	5.29	34.9	468.6	1948.5	2457.4
2015	5.23	61.7	561.7	1891.3	2522.0
2016	5.10	61.2	507.9	1647.2	2221.5
2017	6.11	49.9	475.5	1676.0	2207.5
2018	5.08	21.35	516.4	1401.7	1944.5

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

Figure 3 combines fatal and injury collision statistics in order to better assess the incidence of our most serious collisions.

Figure 3: Collision rates for fatal/major injuries combined–all roads within County



2.2 County roads only (excluding Provincial Highways)

Similar collision trends can be seen when Provincial highways are excluded from the analysis.

Table 7: All collisions by consequence on County Roads (excluding Provincial hwys)

Year	Fatal	Major*	Minor**	PDO***	Total
2009	2	18	314	1336	1670
2010	0	13	260	1260	1533
2011	1	10	267	1096	1374
2012	1	14	228	1115	1358
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

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

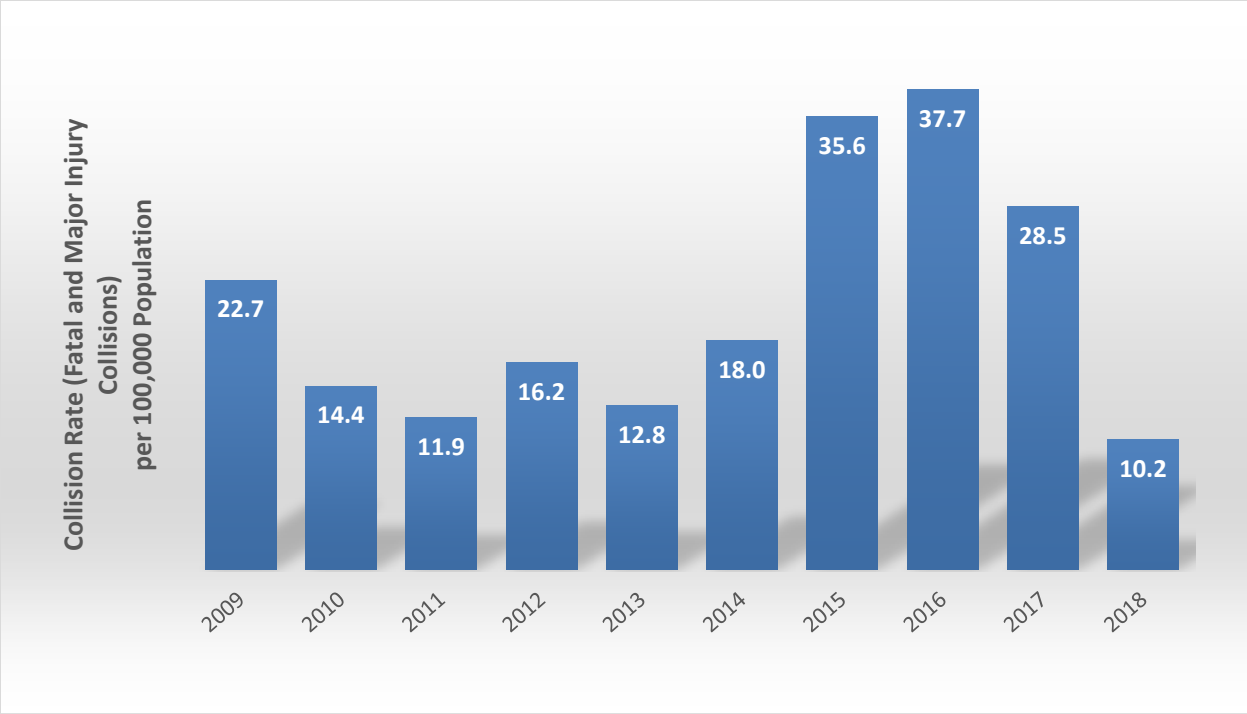
Collision rates in all categories has a decreasing trend between 2009 to 2018 on County maintained roads. Major injury collision rates were higher between 2015 to 2017 but dropped significantly in 2018.

Table 8: Collision rates per 100,000 population on County roads only

Year	Fatal	Major*	Minor**	PDO***	Total
2009	2.3	20.5	356.8	1518.2	1897.8
2010	0.0	14.4	288.1	1396.2	1698.7
2011	1.1	10.8	288.7	1185.0	1485.6
2012	1.1	15.2	246.7	1206.7	1469.6
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

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

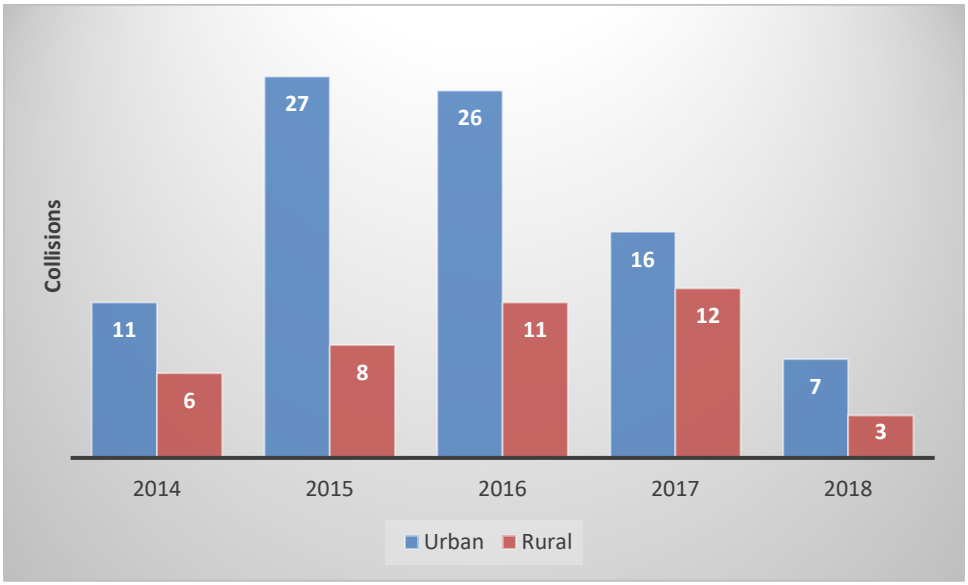
Figure 4: Collision rates for fatal/major injuries combined–County owned roads



2.3 County owned rural vs urban collision trends

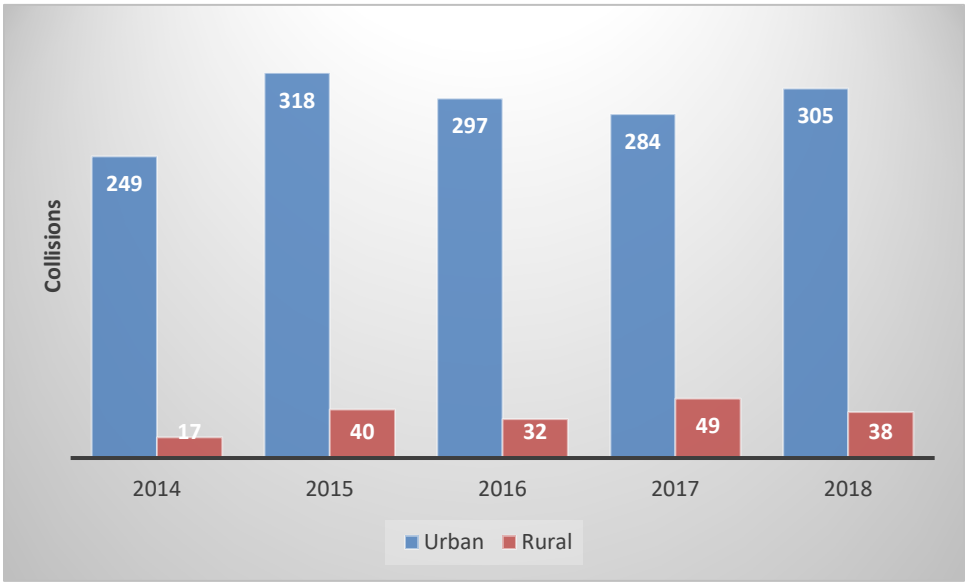
Looking at the data from 2014-2018 from an urban vs rural perspective, we can see that the collision trends have not been the same across the County. There has been a large increase in fatal and major injury collisions in rural area but up to 2017 but there is a significant decrease in both urban and rural area for 2018.

Figure 5: Fatal/major collisions urban vs rural County owned roads (2014-2018)



Minor injury collisions have remained fairly constant over the last 5 years in both rural and urban areas. 2014 recorded the lowest number of minor injury collisions compared to last four years.

Figure 6: Minor injury collisions urban vs rural County owned roads (2014-2018)



Property damage only collisions have dropped substantially in the urban area since 2014 with a slight increase in 2017. Contrary to urban area, rural area PDO collisions had increasing trend from 2014 to 2016 and dropped since then.

Figure 7: PDO collisions urban roads (2014-2018)

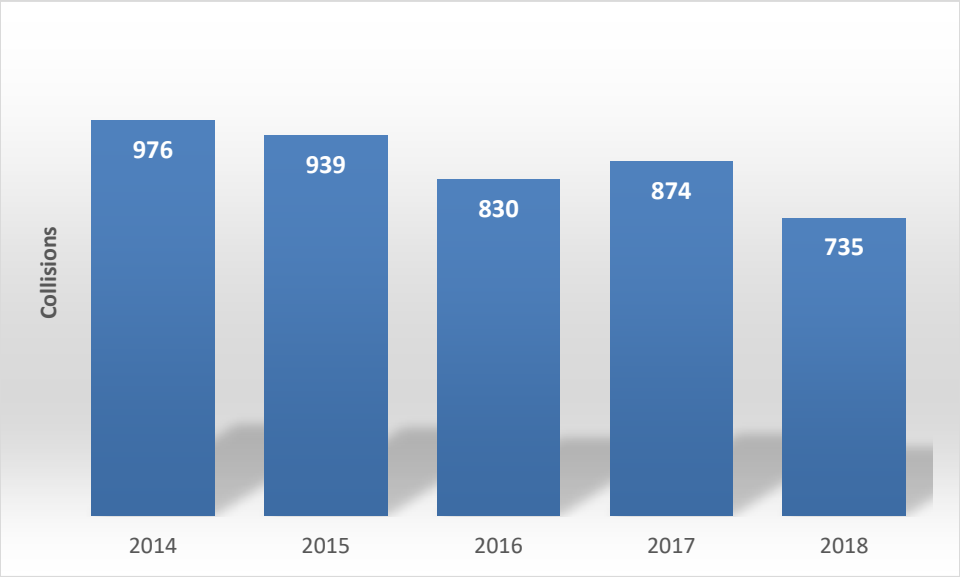
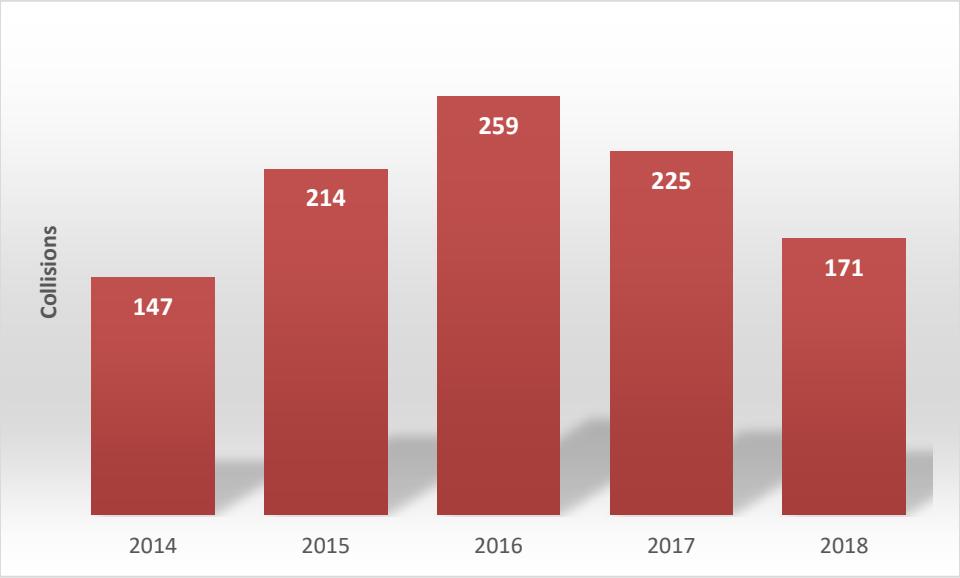


Figure 8: PDO Collisions Rural County Owned Roads (2014-2018)



2.4 Provincial Highways collision trends

Collisions occurring on roads maintained by Alberta Transportation such as highways interchanges, overpasses, and ramp terminals are included in this section. Historically, the majority of fatal collisions in the County take place on provincial highways. This is not surprising given these are the highest speed roads in the County. This was also the case in 2018 with all five fatal collisions happening on highways.

Table 9: Provincial highways collision trends

Year	Fatal	Major Injury	Minor Injury	PDO	Total
2016	4	24	167	569	764
2017	4	23	134	547	708
2018	5	11	165	473	654

A significant number of major injury collisions also tend to take place on the highways. Similar to the trend on County owned roads, the number of major injury collisions on the highways dropped from 2016 to 2018. The number of minor injuries dropped in 2017 and increased in 2018, and property damage only collisions have a decreasing trend for the same period.

The proportion of major injury collisions in Strathcona County that occurred on Provincial highways increased from 40% to 52% between 2016 and 2018.

Table 10: Provincial highway collisions as a percentage of total County collisions

Year	Fatal	Major Injury	Minor Injury	PDO	Total
2016	80%	40%	34%	35%	35%
2017	67%	47%	29%	33%	33%
2018	100%	52%	32%	34%	34%

Section 3: 2018 Collision statistics and trends

Section 3 provides a deeper analysis of 2018 collision statistics and trends.

3.1 Overview

As a result of traffic collisions in Strathcona County in 2018:

6 People Lost Their Lives

5 Driver

1 Passengers

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33 People Sustained Major Injuries Requiring Hospitalization

14 Drivers

8 Passengers

4 Motorcyclists

7 Cyclists

---

719 people sustained minor injuries

3.2 Cost of collisions

The 2018 collision cost study[3] quantifies the costs that are associated with motor vehicle collisions within the Capital Region using local data. It is estimated that collisions in 2018 in Strathcona County cost local taxpayers just over $52 million. This estimate considers only direct costs, not including "human" costs, such as pain, suffering and grief.

Table 11: Direct cost of collisions in Strathcona County 2018

Level of Injury	Estimated Cost per Collision	Number of Victims	Total Cost of Collisions
Fatality	$209,828	6	$1,258,968
Major Injury	$122,115	33	$4,029,795
Minor Injury	$33,987	719	$24,436,653
Property Damage Only	$14,391	1379	$19,845,189
Total Direct Cost of Collisions in Strathcona County*			**$49,570,605**

*Direct costs include costs for property damage, emergency response, health care services, travel delay, legal costs and short-term productivity loss. They do not include any costs for discounted future earnings, pain, suffering or grief.

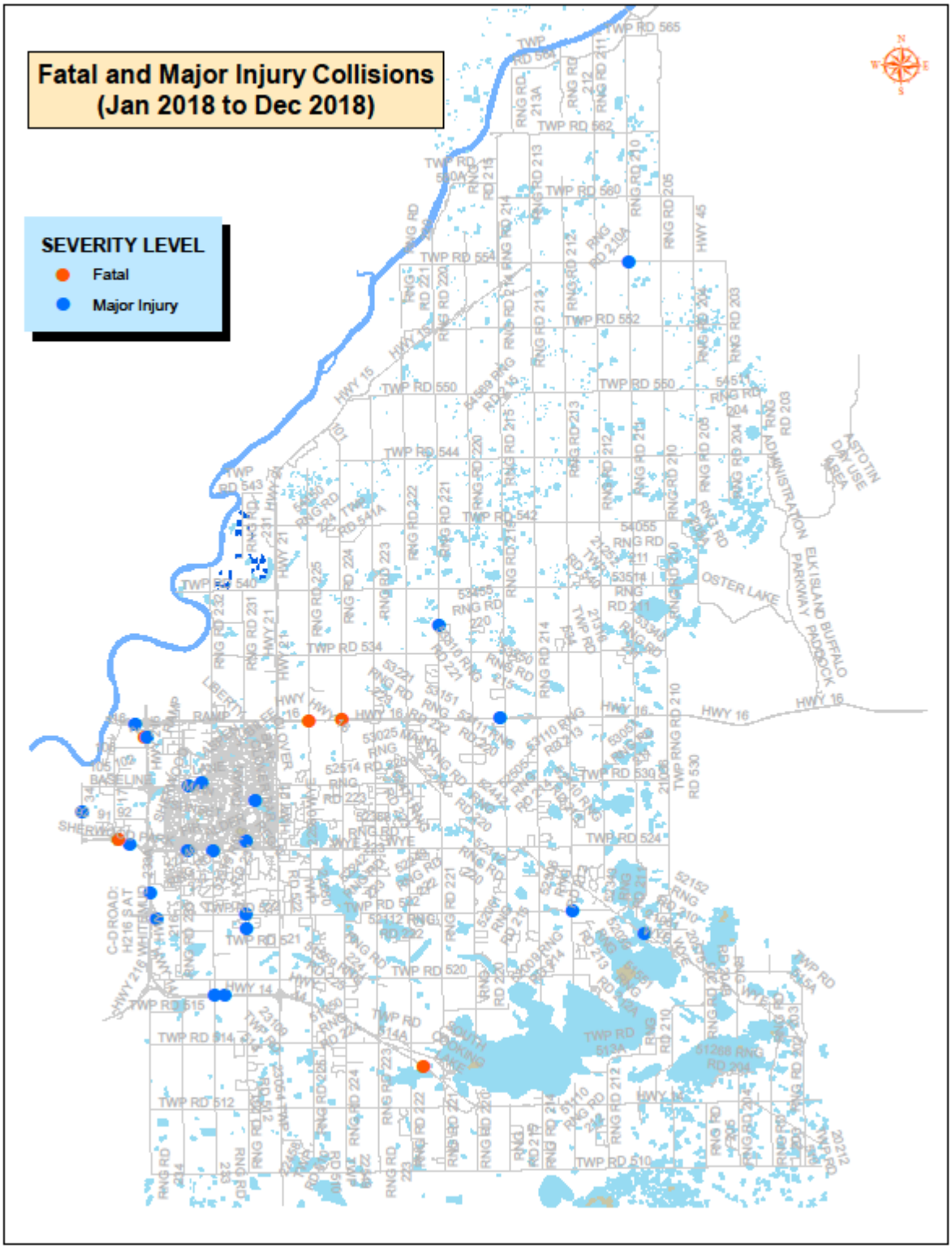
3.3 Major and fatal collisions

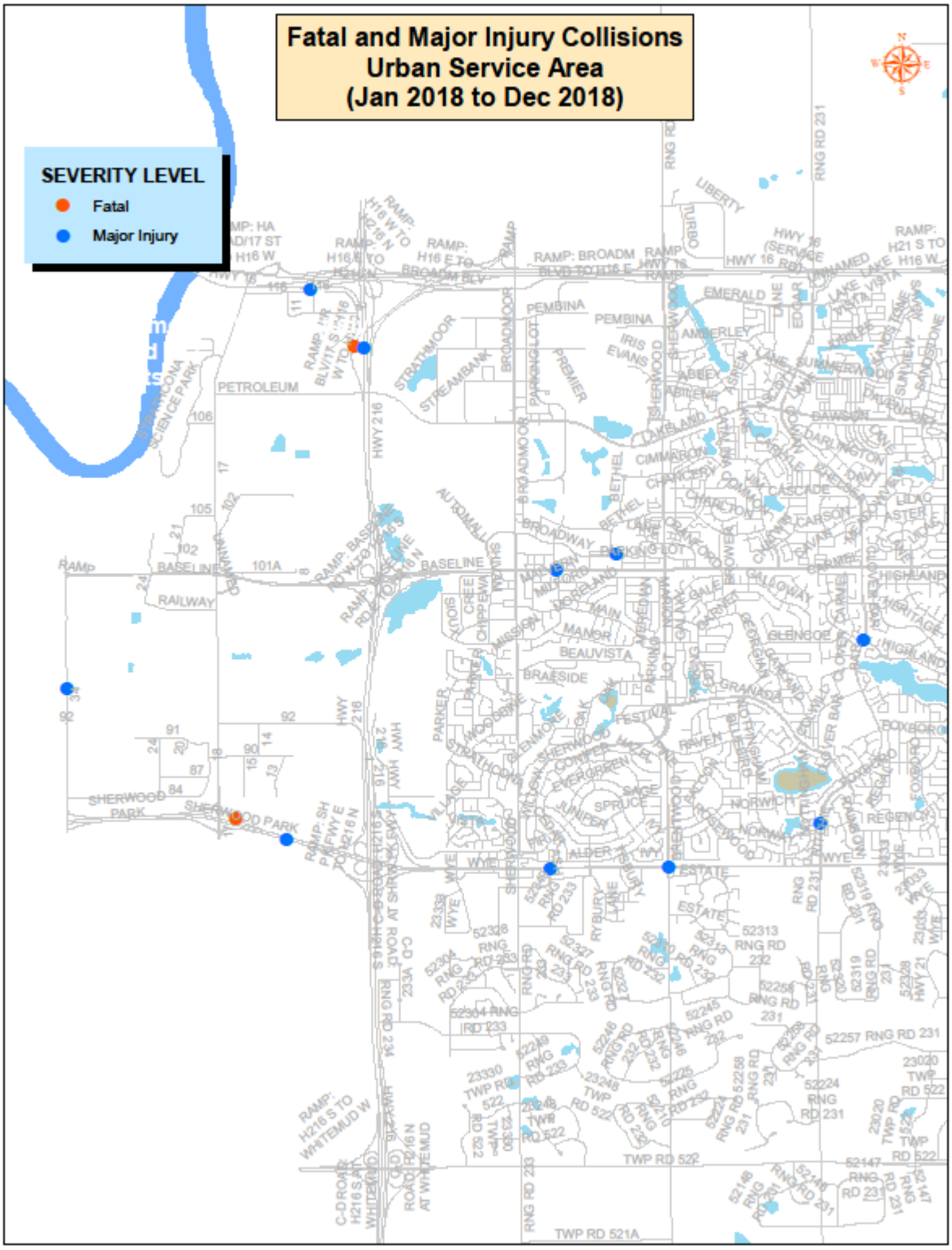
In keeping with Strathcona County's Traffic Safety Strategic Plan (TSSP), our goal is to specifically reduce the kind of collisions that cause serious injury and death.

The following two maps illustrate the location of fatal and major injury collisions in Strathcona County as a whole, and specifically in the urban service area.

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

[3] Collision Cost Study Update, 2018, Paul de Leur


Fatal and Major Injury Collisions
(Jan 2018 to Dec 2018)
SEVERITY LEVEL
Fatal
Major Injury
HWY 16
HWY 15
HWY 14
HWY 21
HWY 45
TWP RD 565
TWP RD 562
TWP RD 560
TWP RD 554
TWP RD 552
TWP RD 550
TWP RD 544
TWP RD 542
TWP RD 540
TWP RD 534
TWP RD 530
TWP RD 524
TWP RD 521
TWP RD 520
TWP RD 515
TWP RD 514
TWP RD 512
TWP RD 510
OSTER LAKE
ELK ISLAND BUFFALO PARKWAY
ASTOTIN DAY USE AREA
BASELINE


Fatal and Major Injury Collisions
Urban Service Area
(Jan 2018 to Dec 2018)
SEVERITY LEVEL
Fatal
Major Injury
PETROLEUM
PEMBINA
BASELINE
BROADWAY
HWY 216
HWY 16
SHERWOOD PARK
RAILWAY
TWP RD 522
TWP RD 521A
RNG RD 231
RNG RD 233
LIBERTY
EMERALD
BEAUVISTA
BRAESIDE
GLENGOE
HIGHLAND
ESTATE
ALDER
IVY
SPRUCE
JUNIPER
NORWOOD
REGENCY
BOXBORO
FOXBORO
LAKE VISTA
LAKE SUMMERSIDE
LAKE SUNRISE
LAKE SUNDANCE
LAKE SUNSET
LAKE SUNWOOD
LAKE SUNNYSIDE
LAKE SUNRIDGE
LAKE SUNDOWN
LAKE SUNVIEW
LAKE SUNSHINE
LAKE SUNCREST
LAKE SUNBURY
LAKE SUNBURST
LAKE SUNBEAM
LAKE SUNBELT
LAKE SUNBRIDGE
LAKE SUNBROOK
LAKE SUNCREEK
LAKE SUNDALE
LAKE SUNDOWNER
LAKE SUNFIELD
LAKE SUNFLOWER
LAKE SUNGLOW
LAKE SUNGROVE
LAKE SUNHAVEN
LAKE SUNHILL
LAKE SUNLAKE
LAKE SUNLIGHT
LAKE SUNMEADOW
LAKE SUNMOUNT
LAKE SUNNYBROOK
LAKE SUNNYCREST
LAKE SUNNYDALE
LAKE SUNNYFIELD
LAKE SUNNYGLEN
LAKE SUNNYHILL
LAKE SUNNYLAKE
LAKE SUNNYMEAD
LAKE SUNNYMOUNT
LAKE SUNNYRIDGE
LAKE SUNNYSIDE
LAKE SUNNYVALE
LAKE SUNNYVIEW
LAKE SUNNYWOOD
LAKE SUNRISE
LAKE SUNSET
LAKE SUNSHINE
LAKE SUNVIEW
LAKE SUNWOOD
LAKE SUNNYSIDE
LAKE SUNRIDGE
LAKE SUNDOWN
LAKE SUNVIEW
LAKE SUNSHINE
LAKE SUNCREST
LAKE SUNBURY
LAKE SUNBURST
LAKE SUNBEAM
LAKE SUNBELT
LAKE SUNBRIDGE
LAKE SUNBROOK
LAKE SUNCREEK
LAKE SUNDALE
LAKE SUNDOWNER
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LAKE SUNNYHILL
LAKE SUNNYLAKE
LAKE SUNNYMEAD
LAKE SUNNYMOUNT
LAKE SUNNYRIDGE
LAKE SUNNYSIDE
LAKE SUNNYVALE
LAKE SUNNYVIEW
LAKE SUNNYWOOD
LAKE SUNRISE
LAKE SUNSET
LAKE SUNSHINE
LAKE SUNVIEW
LAKE SUNWOOD

3.4 Driver's prior action

Followed Too Closely was the most common prior action of drivers involved in collisions in 2018.

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. animal strike
5. stop sign violation
6. improper lane change
7. struck parked vehicle
8. improper turn

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

1. animal strike
2. followed too closely/rear-ended
3. struck parked vehicles
4. backed unsafely
5. improper lane change
6. left turn across path
7. improper turn
8. disobey traffic signal

Side Impact (T-Bone, left turn across path, right angle) collisions are the most dangerous kind of collision for vehicle occupants, as serious 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 the kind of collision that results in a 90 degree side impact than those recorded in PDO collisions.

3.5 Temporal analysis

Month

The highest number of fatal and injury collisions took place in November 2018. Generally, the most serious collisions occurred from May to July as well as in December and January. PDO collisions were most common in November 2018. Generally, PDO collisions were high in the winter months and lowest in the summer.

Figure 9: Fatal and Injury Collisions by Month 2018

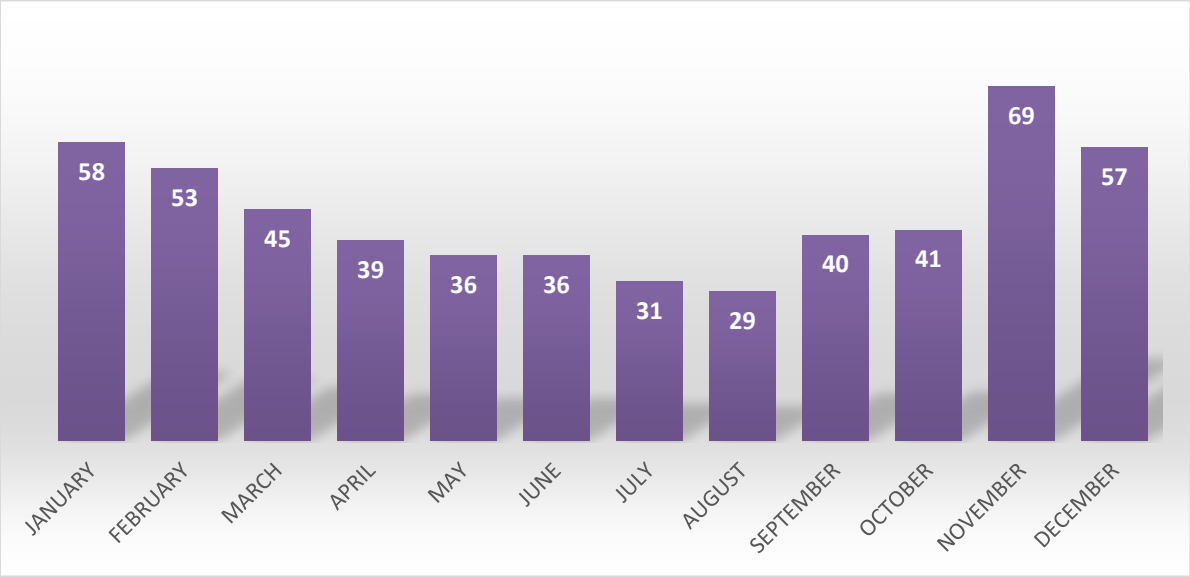
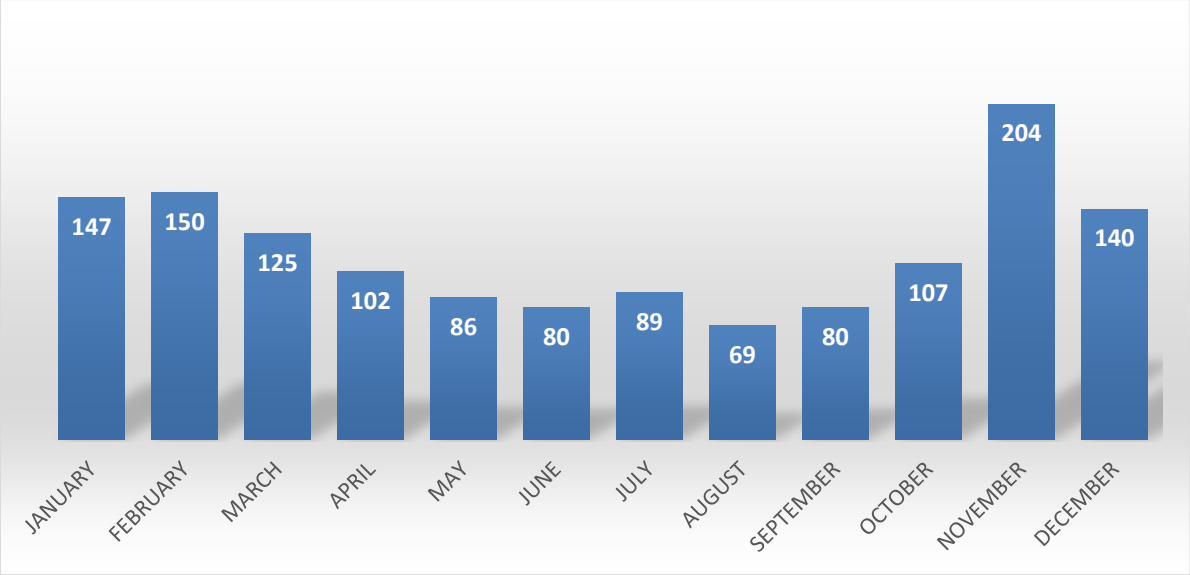


Figure 10: Property damage only (PDO) collisions by month 2018



Day of the Week

Friday was the most common day of the week for all kinds of collisions in 2018.

Figure 11: Fatal and injury collisions by day of the week 2018

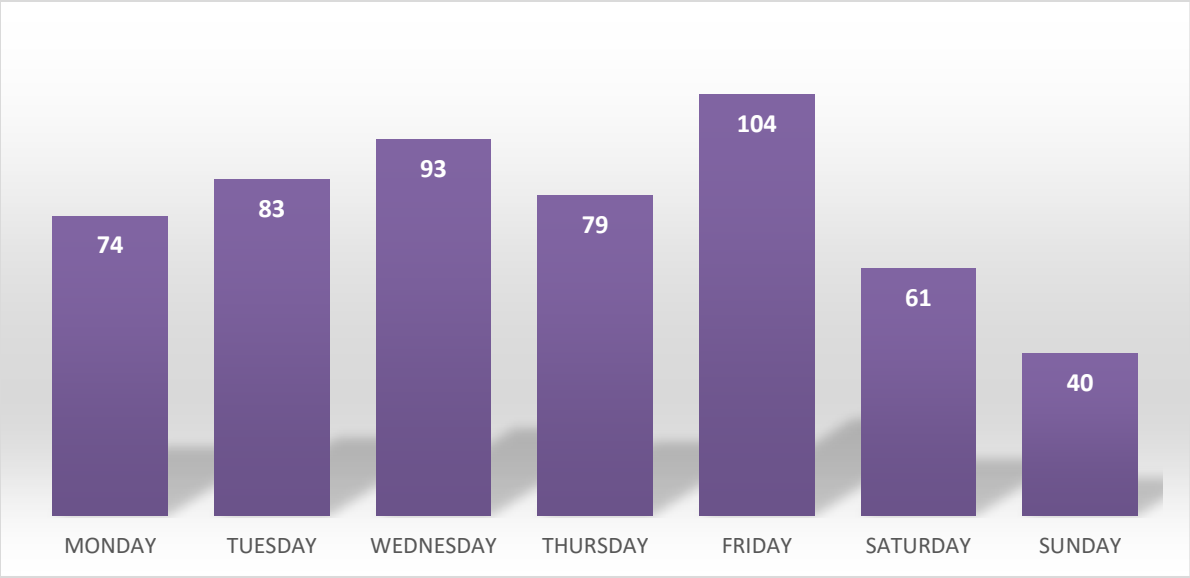
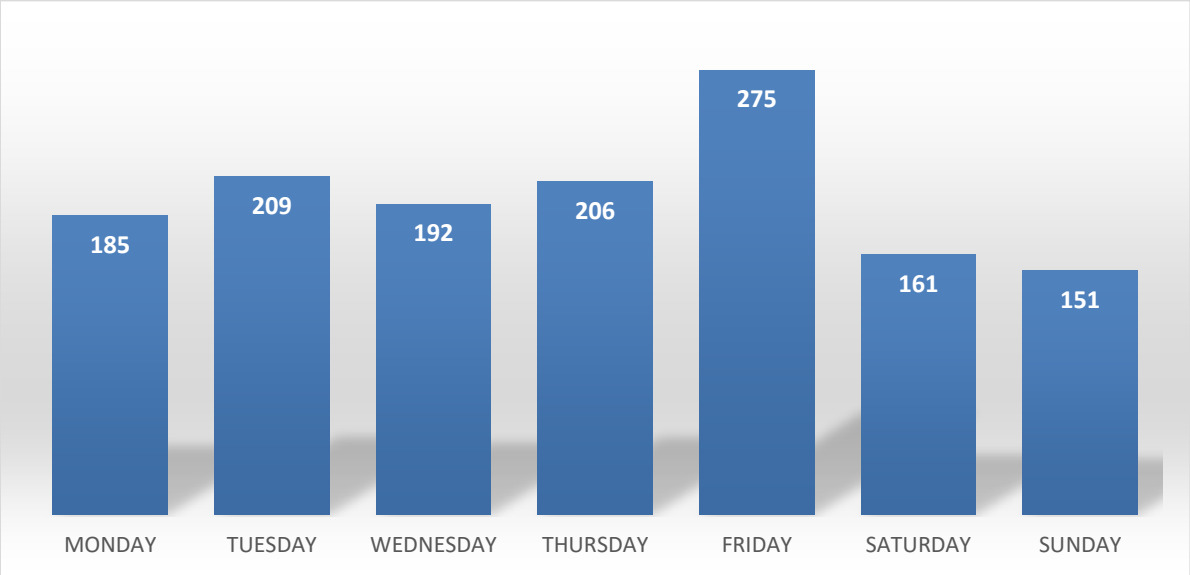


Figure 12: Property damage only (PDO) collisions by day of the week 2018



Time of Day

On weekdays, all types of collisions were most likely between 5:00 and 6:00 pm. Generally, weekday collisions are highest in the afternoon peak time, with a less marked increase during the morning peak hours.

Figure 13: Fatal and injury collisions by time of Day 2018- weekdays

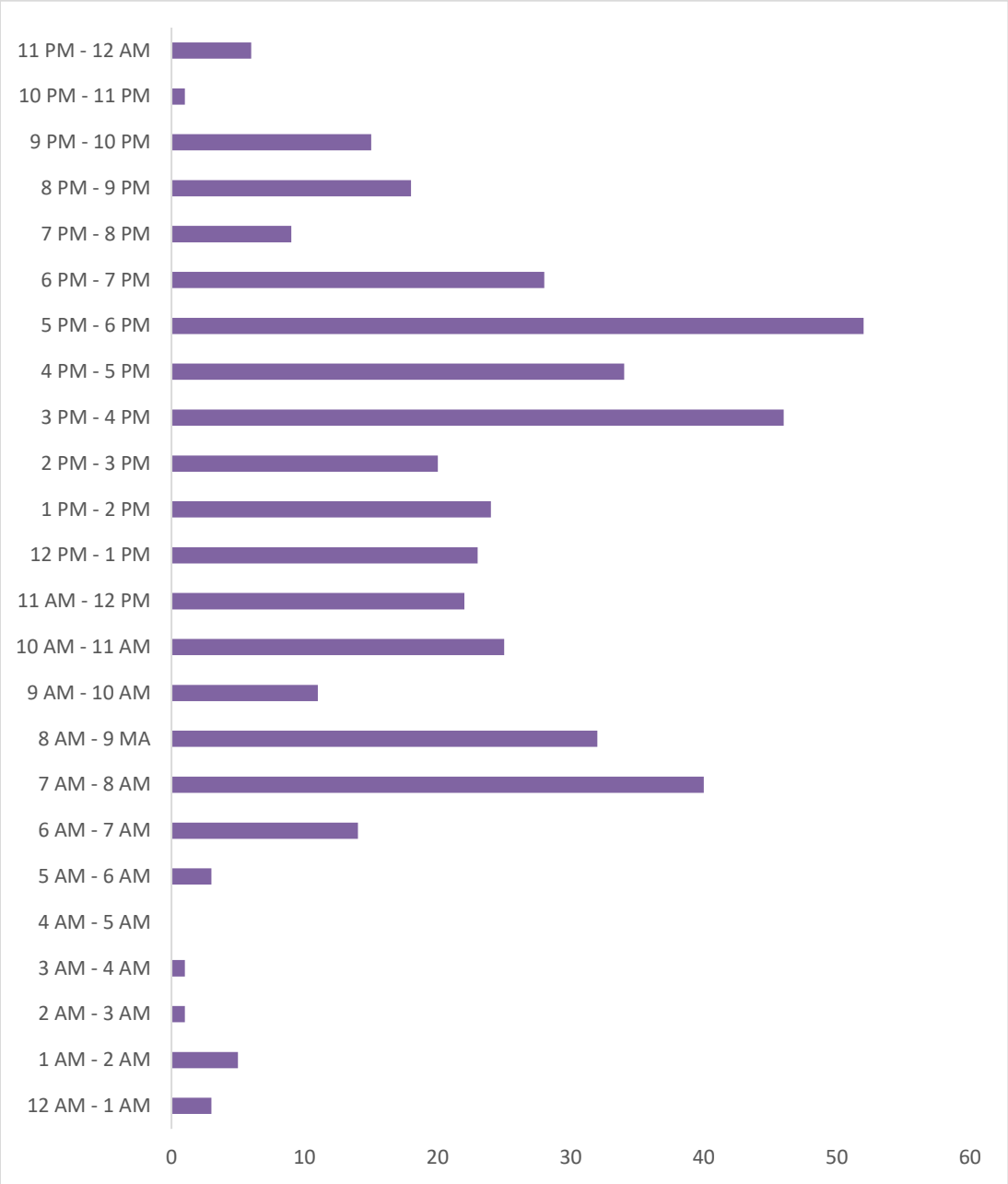
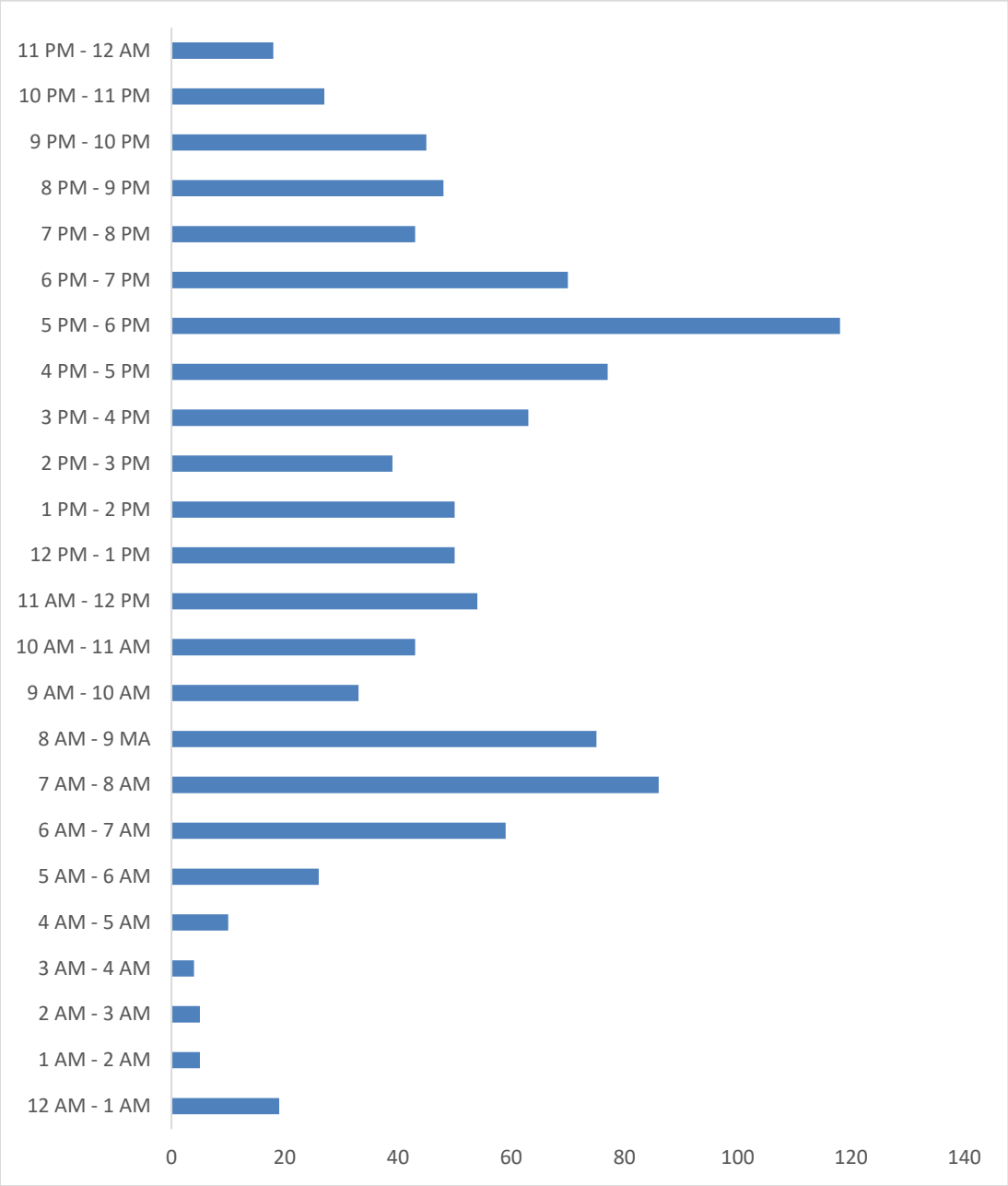


Figure 14: Property damage only collisions by time of day 2018- weekdays



On weekends, collisions generally peak in the early afternoon. This is most marked with fatal and injury collisions, which are most likely to happen between 2:00 and 3:00 pm.

Figure 15: Fatal and injury collisions by time of day 2018- weekends

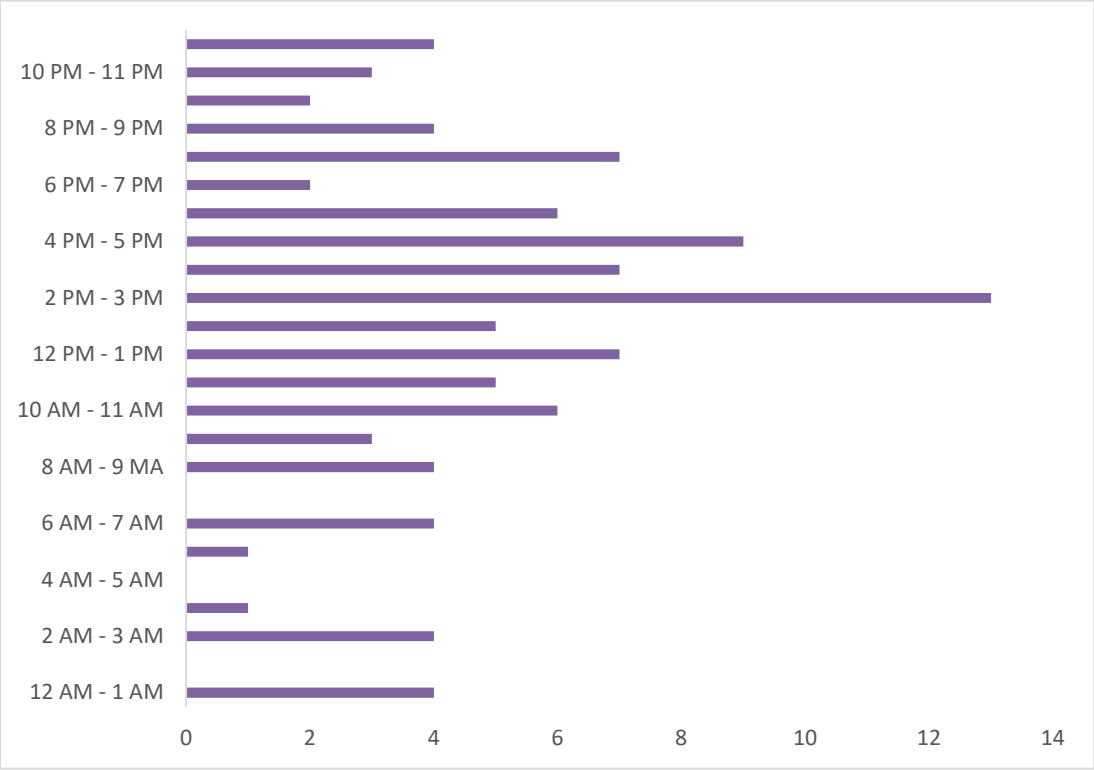
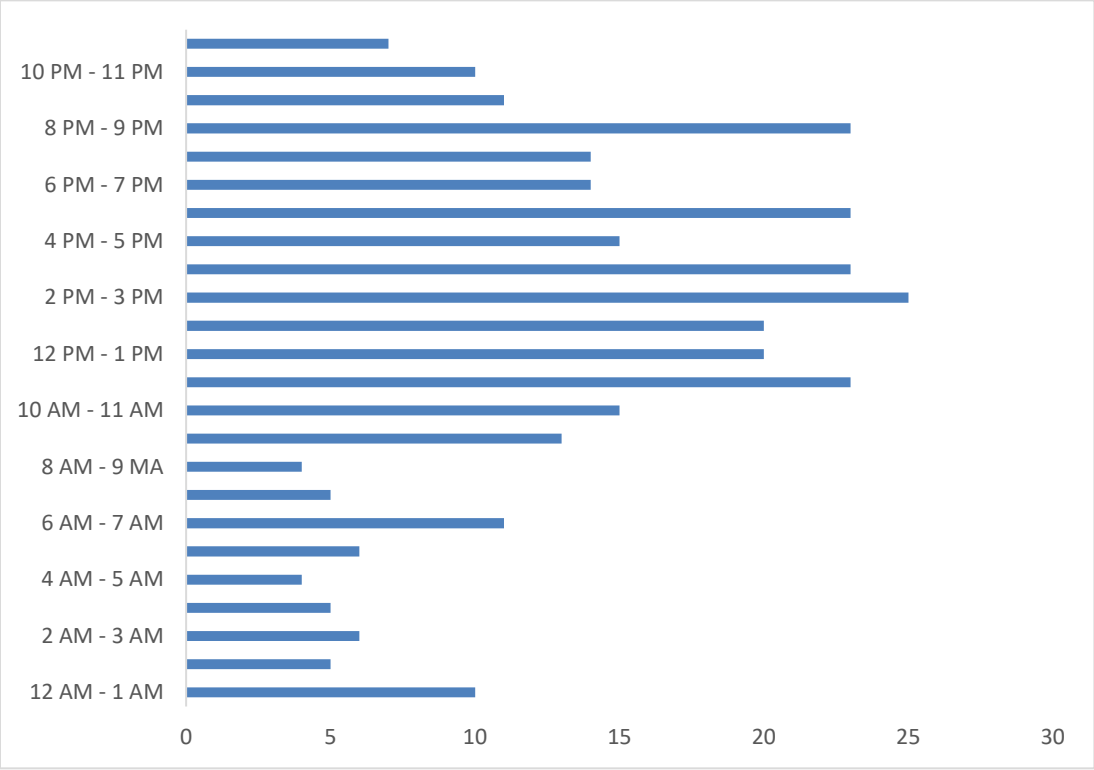


Figure 16: Property damage only collisions by time of day 2018- weekends



3.6 Intersection-related collisions

In 2018, 41 percent of the collisions in Strathcona County were intersection-related. About 2/3 of injury collisions happen at intersections, and 1/5 fatal collisions occurred at an intersection. 2018 saw a decreasing trend towards intersection-related collisions over 2017.

Table 12: Intersection-related collisions as a percentage of total collisions

	2017	2018	% change
All Collisions	47.51	40.72	-14.29
PDO	42.68	33.87	-20.64
Minor Injury	63.70	59.06	-7.82
Major Injury	59.52	52.38	-12.00
Fatal	16.67	20.00	19.98

The top two intersections for collision frequency are the highest volume intersections in Sherwood Park. Four of the top collision frequency locations are on Baseline Road, and three on Wye Road.

Table 13: Top 10 intersections for collision frequency 2018

Rank	Intersection		Fatal	Major	Minor	PDO	Total
1	Baseline Rd	Broadmoor Blvd	0	0	12	27	39
2	Baseline Rd	Sherwood Dr	0	0	13	25	38
3	Hwy 16 EB Ramp	Broadmoor Blvd	0	0	17	16	33
4	Baseline Rd	Clover Bar Rd	0	0	8	12	20
5	Wye Rd	Clover Bar Rd	0	0	8	10	18
6	Fir St	Sherwood Dr	0	0	8	9	17
7	Wye Rd	Ordze Dr	0	0	1	15	16
8	Baseline Rd	Shivam Blvd	0	0	4	11	15
9	Lakeland Dr	Sherwood Dr	0	0	4	10	14
10	Wye Rd	Brentwood Blvd	0	1	4	8	13

Intersections with four or more fatal/major injury collisions are listed in the table below. Five of the top 13 intersections for fatal/major injury collision are located on Highways, three on Baseline Rd and three are on Wye Road. Intersection ranking is based on 10 years of collision data (2009-2018)

Table 14: Intersections by frequency of fatal/major injury collisions (2009-2018)

Rank	Intersection		Fatal	Major	Total
1	Hwy 14	Rng Rd 232	0	6	6
2	Wye Rd	Brentwood Blvd	0	6	6
3	Wye Rd	Ash St	0	5	5
4	Baseline Rd	Glenbrook Blvd	1	3	4
5	Wye Rd	Hwy 21	1	3	4
6	Hwy 16	Hwy 830	1	3	4
7	Hwy 16	Rng Rd 224	1	3	4
8	Baseline Rd	17 St	0	4	4
9	Hwy 15	Hwy 830	0	4	4
10	Fir St	Sherwood Dr	0	4	4
11	Lakeland Dr	Broadmoor Blvd	0	4	4
12	Baseline Rd	Sherwood Dr	0	4	4
13	Hwy 628	Rng Rd 231	0	4	4

The top four intersections for frequency of rear-end collisions are the highest volume intersections in Sherwood Park. Four of the top collision frequency locations are on Baseline Road, and three are on Sherwood Drive.

Table 15: Top 10 intersections for rear end collisions

Rank	Intersection		Collisions
1	Baseline Rd	Sherwood Dr	32
2	Hwy 16 EB Ramp	Broadmoor Blvd	27
3	Baseline Rd	Broadmoor Blvd	25
4	Baseline Rd	Clover Bar Rd	15
5	Wye Rd	Clover Bar Rd	15
6	Lakeland Dr	Sherwood Dr	9
7	Baseline Rd	Shivam Blvd	9
8	Sherwood Dr	Broadmoor Blvd	8
9	Main Blvd	Sherwood Dr	8
10	Sherwood Dr	Brentwood Blvd	7

The top intersections for side impact collisions are lower volume intersections when compared with rear-end collisions locations.

Table 16: Top seven intersections for left-turn across path (LTXP)/right angle collisions

Rank	Intersection		Collisions
1	Wye Rd	Ordze Dr	13
2	Fir St	Sherwood Dr	11
3	Wye Rd	Hwy 21	7
4	Emerald Dr	Clover Bar Rd	7
5	Wye Rd	Ash St	6
6	Baseline Rd	17 St	6
7	Lakeland Dr	Clover Bar Rd	6

3.7 Neighbourhood collisions

There were no major injury or fatal collisions reported on residential roads in the County in 2017 or 2018.

Table 17: Residential collisions as a percentage of major injury and fatal collisions

	Major injury collisions		Fatal collisions	
	2017	2018	2017	2018
Residential Roads	0%	0%	0%	0%
Arterials/Highways	100%	100%	100%	100%

Table 18: Major injury and fatal collisions 2017/2018 by location

	2017		2018	
	FATAL	MAJOR	FATAL	MAJOR
Urban Residential	0	0	0	0
Arterials	2	29	0	10
Highways	4	20	5	11

3.8 Animal collisions

In 2018, 14% of all reported collisions were animal related. Most animal collisions are not serious for vehicle occupants, with 90% of those reported causing property damage only. Overall, there was a 20% decrease in the number of animal collisions from 2017 to 2018.

Table 19: 2017/2018 animal collisions in Strathcona County

Severity	2017	2018	% Change
Fatal	1	0	-100.00
Major Injury	0	0	N/A
Minor Injury	26	26	0.00
PDO	310	243	-21.61
Total	337	269	-20.18

3.9 Demographics

Individuals aged 25-34 were the most likely to be injured in a motor vehicle collision in 2018. Five fatalities were male drivers, and one was a male passenger.

Table 20: Fatalities and injuries as a result of 2018 collisions by age

Age Group	Fatal	Major	Minor	Total
0-5	0	0	14	14
6-11	0	1	22	23
12-15	0	0	21	21
16-18	2	3	67	72
19-24	0	6	86	92
25-34	0	2	142	144
35-44	1	3	124	128
45-54	1	5	103	109
55-64	0	6	76	82
65-74	0	5	37	42
75+	2	1	17	20
Unknown	0	1	10	11

Of the six individuals sustaining fatal or major injuries who were 18 and under, four were passengers and two were drivers.

Table 21: Fatalities and injuries as a result of 2018 collisions by gender

Gender	Fatal	Major	Minor	Total
Female	0	13	417	430
Male	6	20	296	322
Unknown	0	0	6	6

3.10 Vulnerable road user collisions

3.10.1 Pedestrian collisions

There was a total of 21 pedestrian collisions in Strathcona County in 2018, resulting in 18 minor injuries; three were property damage only. Collisions occurring on public roads and in parking lots are included in the tables below.

Table 22: Pedestrian collisions 2017/2018 by severity

Severity	2017	2018	% Change
Fatal	3	0	-100.00
Major	3	0	-100.00
Minor	18	18	0.00
PDO	1	3	200.00
Total	25	21	-16.00

Five pedestrian collisions took place on the County's arterial roads and six happened in residential area. No pedestrian collisions were reported on highways in 2018.

Table 23: Location of pedestrian collisions 2018

Severity	Arterial	Residential	Non-Residential	Parking Lot
Fatal	0	0	0	0
Major	0	0	0	0
Minor	4	5	1	8
PDO	1	1	0	1
Total	5	6	1	9

48% of pedestrians involved in collisions were females. Seven pedestrians were under 18 years of age and two were seniors.

Table 24: Fatalities and injuries as a result of 2018 pedestrian collisions by age and gender

Number	Age	Gender	Severity	Location
1	3	M	Minor	Parking Lot
2	10	F	Minor	Parking Lot
3	13	F	None	Arterial
4	14	M	None	Residential
5	15	F	Minor	Residential
6	16	M	Minor	Arterial
7	17	M	Minor	Arterial
8	19	M	Minor	Parking Lot
9	20	M	Minor	Residential
10	28	F	Minor	Arterial
11	29	M	Minor	Arterial
12	30	M	Minor	Residential
13	33	F	Minor	Parking Lot
14	39	F	Minor	Arterial
15	44	M	Minor	Collector
16	45	M	Minor	Residential
17	49	F	Minor	Residential
18	49	F	Minor	Collector
19	55	F	Minor	Parking Lot
20	57	F	Minor	Parking Lot
21	60	M	Minor	Parking Lot
22	78	F	Minor	Parking Lot
23	83	M	None	Parking Lot

Notably, all the collisions involving a pedestrian under 10 years or older than 55 years occurred in a parking lot.

Table 25: Drivers' prior actions – 2018 pedestrian collisions

Prior Action	Major	Minor	PDO	Total
Driving Properly	0	4	0	4
Failed to Yield Pedestrian ROW	0	3	2	5
Backed Unsafely	0	2	0	2
Other	0	2	0	2
Unknown	0	7	1	8

3.10.2 Bicycle collisions

There was a total of six bicycle collisions in Strathcona County in 2018, which resulted seven major and three minor injuries.

Table 26: Bicycle collisions 2017/2018 by severity

Severity	2017	2018	% Change
Fatal	0	0	N/A
Major	1	3	50.00
Minor	9	3	-66.67
PDO	1	0	-100.00
Total	11	6	-45.45

Four bicycle collisions took place on the County's arterial roads, one on a Provincial highway and one on a non-residential collector road.

Table 27: Location of bicycle Collisions - 2018

Severity	Arterial	Highway	Non-Residential Collector
Fatal	0	0	0
Major	1	1	1
Minor	3	0	0
PDO	0	0	0
Total	4	1	1

Followed too closely caused five major injuries in one collision.

Table 28: Drivers' prior actions – 2018 bicycle collisions

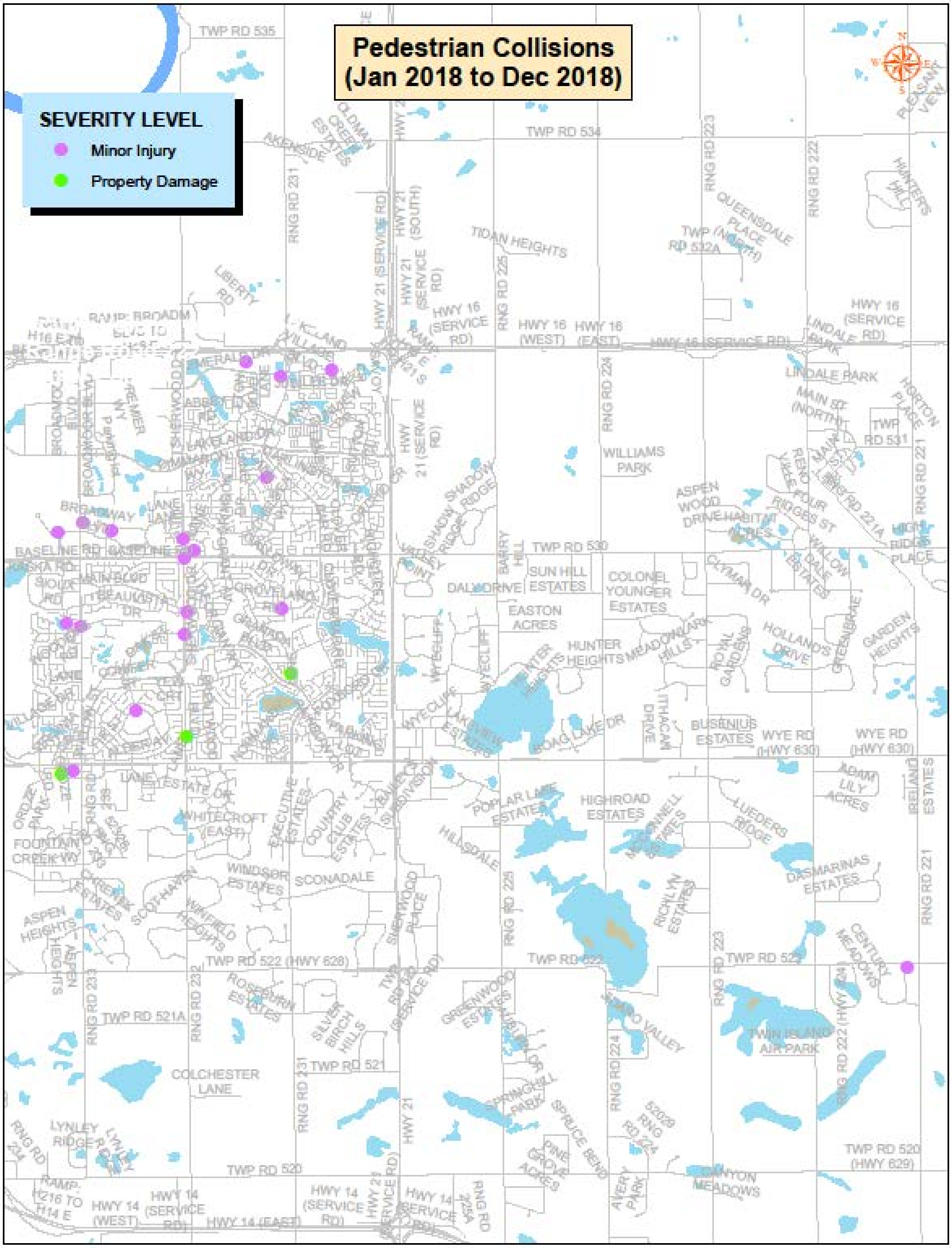
Prior Action	Major	Minor	Total
Driving Properly	2	3	5
Followed Too Closely	1	0	1

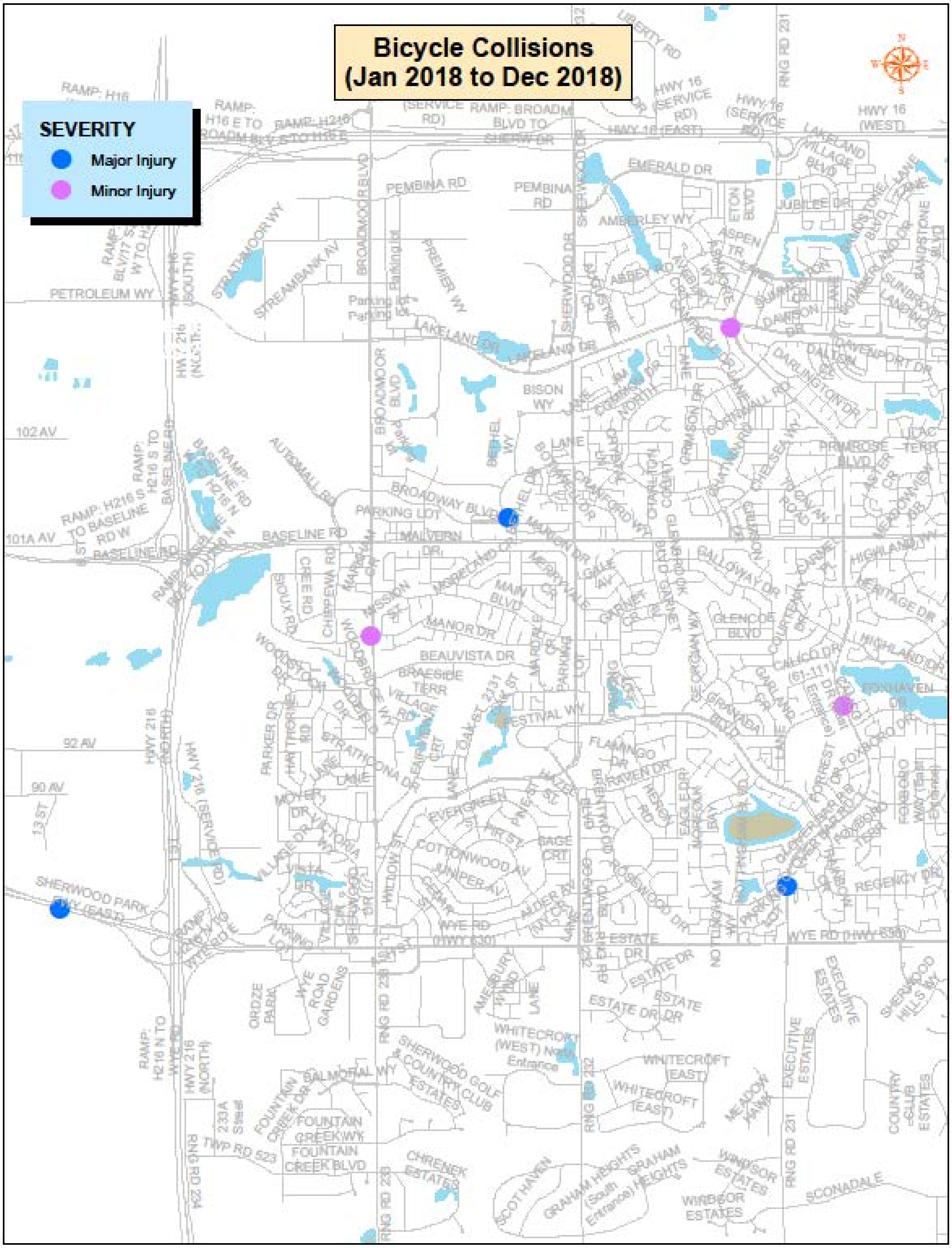
Table 29: Major and minor injuries as a result of 2018 bicycle collisions by age and gender

Number	Age	Gender	Severity	Location
1	10	M	Minor	Arterial
2	12	M	Minor	Arterial
3	13	M	Minor	Arterial
4	28	F	Major	Hwy
5	45	M	Major	Collector
6	56	F	Major	Hwy
7	58	M	Major	Hwy
8	62	M	Major	Hwy
9	66	M	Major	Hwy
10	81	M	Major	Arterial

Cyclist collisions involved six male and four females. Three cyclists were 18 years old and under. All others were between the age of 28 and 81. Half of the cyclists involved in collisions were older than 56.

The following maps illustrates the locations of all pedestrian and bicycle related collisions in Strathcona County.


Pedestrian Collisions
(Jan 2018 to Dec 2018)
SEVERITY LEVEL
Minor Injury
Property Damage
TWP RD 535
TWP RD 534
TWP RD 530
TWP RD 531
TWP RD 522 (HWY 628)
TWP RD 521A
TWP RD 521
TWP RD 520
TWP RD 520 (HWY 629)
RNG RD 231
RNG RD 232
RNG RD 233
RNG RD 223
RNG RD 222
RNG RD 221
RNG RD 224
RNG RD 225
HWY 16 (WEST)
HWY 16 (EAST)
HWY 16 (SERVICE RD)
HWY 14 (WEST)
HWY 14 (EAST)
HWY 21
WYE RD (HWY 630)
BASELINE RD
BROADWAY
TIDAN HEIGHTS
QUEENSDALE PLACE
LINDALE PARK
WILLIAMS PARK
SUN HILL ESTATES
COLONEL YOUNGER ESTATES
EASTON ACRES
HUNTER HEIGHTS
ROYAL GARDENS
HOLLAND'S DRIVE
GARDEN HEIGHTS
BUSENIUS ESTATES
HIGHROAD ESTATES
POPLAR LAKE ESTATES
LUEDERS RIDGE
DASMARINAS ESTATES
WHITECROFT (EAST)
WINDSOR ESTATES
SCONADALE
COUNTRY CLUB ESTATES
EXECUTIVE ESTATES
ASPEN HEIGHTS
FOUNTAIN CREEK WY
COLCHESTER LANE
LYNLEY RIDGE
TWIN ISLAND AIR PARK
CENTURY MEADOWS
CANYON MEADOWS
SPRINGHILL PARK
PINE GROVE ACRES
AVERY PARK
GREENWOOD ESTATES
ROSEBURN ESTATES
SILVER BIRCH HILLS
SHERWOOD PLACE
HILLSDALE
BOAG LAKE DR
ITHACA DRIVE
RICHLYN ESTATES
IRELAND ESTATES
ADAM LILY ACRES
PLEASANT VIEW
HUNTERS HILL


Bicycle Collisions
(Jan 2018 to Dec 2018)
SEVERITY
Major Injury
Minor Injury
HWY 16 (EAST)
HWY 16 (WEST)
EMERALD DR
PEMBINA RD
AMBERLEY WY
PETROLEUM WY
STREAMBANK AV
STRATHMOOR WY
BROADMOOR BLVD
PREMIER WY
LAKELAND DR
BISON WY
102 AV
101A AV
BASELINE RD
BROADWAY BLVD
PARKING LOT
MALVERN DR
AUTOMALL RD
MANOR DR
BEAUVISTA DR
FESTIVAL WY
GLENCOE BLVD
HIGHLAND DR
FOXHAVEN DR
92 AV
90 AV
13 ST
SHERWOOD PARK FWY (EAST)
FLAMINGO DR
RAVEN DR
EVERGREEN ST
COTTONWOOD AV
JUNIPER AV
WYE RD (HWY 630)
REGENCY DR
ESTATE DR
WHITECROFT (EAST)
WHITECROFT (WEST)
BALMORAL WY
SHERWOOD GOLF & COUNTRY CLUB ESTATES
FOUNTAIN CREEK BLVD
TWP RD 523
CHRENEK ESTATES
SCOT HAVEN
GRAHAM HEIGHTS
WINDSOR ESTATES
SCONADALE
EXECUTIVE ESTATES
COUNTRY CLUB ESTATES
RNG RD 231
RNG RD 232
RNG RD 233
RNG RD 224
HWY 216 (NORTH)
HWY 216 (SOUTH)

3.10.3 Motorcyclists

There was a total of 22 motorcycle collisions occurred in Strathcona County in 2018, resulting in six major and 14 minor injuries. Major injury collisions reduced by 33 percent, and overall collisions reduced by eight percent in compared to 2017 data.

Table 30: Motorcycle collisions 2017/2018 by severity

Severity	2017	2018	% Change
Fatal	1	0	-100.00
Major	9	6	-33.33
Minor	11	13	18.18
PDO	3	3	0.00
Total	24	22	-8.33

Table 31: Prior actions of motorcyclist involved in collisions - 2018

Prior Action	Major	Minor	PDO	Total
Driving Properly	2	4	0	6
Followed Too Closely	1	1	1	3
Other	1	2	0	3
Ran-Off-Road	0	1	0	1
Improper Lane Change	0	1	0	1
Unknown	2	4	2	8

3.11 Commercial vehicle collisions

Commercial vehicles include trucks>4500 kg, buses and tractor trailers. Two out of five fatal collisions, and four out of 21 major injury collisions involved a commercial vehicle.

Table 32: Commercial vehicle collisions 2017/2018 by severity

Severity	2017	2018	% Change
Fatal	0	2	100.00
Major	5	2	-60.00
Minor	18	33	83.33
PDO	100	99	-1.00
Total	124	136	9.68

3.12 Impaired Driving

Alcohol was involved in 55 collisions in 2018, including three major and 16 minor injury collisions. Overall, the number of collisions involving an impaired road user was reduced by 24.66%

Table 33: Alcohol related collisions 2017/2018 by severity

Severity	2017	2018	% Change
Fatal	1	0	0.00%
Major	7	3	-57.14%
Minor	16	16	0.00%
PDO	49	36	-26.53%
Total	73	55	-24.66%

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 with the exception of 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.

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, pedacyclist or pedestrian.

Struck Object

A collision in which the primary collision involved a single vehicle and a fixed object.

Animal

A collision involving a vehicle striking any animal, including a deer.

Pedestrian

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

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 as a result 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.

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www.thenounproject.com