

# Rural Road Safety Action Plan



2024

**Prepared by:**  
Transportation Engineering and Operations  
Strathcona County



**Contents**

- Executive summary .....2
- A. Introduction.....5
  - I. Traffic collision data collection and analysis .....5
  - II. Development of the Rural Road Safety Action Plan .....6
- B. Current state of rural road safety in Strathcona County.....6
  - I. Frequency and location of rural collisions .....6
  - II. Types of collisions on rural network.....9
  - III. Driver actions and behaviours resulting in FMIs on the rural network ..... 14
  - IV. Demographics of at-fault drivers in FMI collisions on the rural network ..... 16
  - V. Resident concerns in rural areas..... 18
- C. Research and trends in rural road safety ..... 20
- D. Current and recommended rural road safety initiatives ..... 22
  - I. Engineering ..... 22
  - II. Enforcement ..... 26
  - III. Education ..... 27
  - IV. Engagement ..... 27
  - V. Emergency response..... 29
  - VI. Evaluation ..... 31
- F. Conclusion ..... 34
- Appendix 1: Fatal and major injury collisions ATEC rural highways 2018-2022..... 35
- Appendix Two: Map of all injury collisions on Strathcona County-owned rural roads 2018-2022 (excluding animal strikes) ..... 36
- Appendix Three: Recommendations of the ITMP and SRRMP ..... 37

## Executive summary

The majority of fatal and major injury (FMI) collisions in Strathcona County each year happen in rural areas. The following table summarizes information on these collisions and the demographics of those involved in rural FMI collisions in Strathcona County in the last five years.

Table 1: Summary of collision details for all FMI collisions in rural Strathcona County 2018-2022

	Number FMI	Percent FMI	Number MI	Percent MI	Number fatal	Percent fatal
All rural FMI collisions	67	100	45	100	22	100
<b>Location</b>						
AT-rural highway	52	78	32	71	20	91
SC-rural road	15	22	13	29	2	9
<b>Unit type</b>						
Pedestrians	2	3	1	2	1	5
Cyclists	1	1	1	2	0	0
Motorcycles	14	21	12	27	2	9
Commercial vehicles	14	21	5	11	9	41
Animals	5	7	4	9	1	5
Single vehicle	16	24	14	31	2	9
<b>Driver condition/contributing factors</b>						
Impaired-alcohol/drugs	4	6	3	7	1	5
Fatigued/asleep	1	1	1	2	0	0
Unrestrained	3	4	2	4	1	5
No helmet	1	1	1	2	0	0
<b>At-fault driver demographics in FMI collisions (n=66 FMI, n=45 MI, n= 21 fatal)</b>						
Male	53	80	35	78	18	86
Female	13	20	10	22	3	14
County resident	20	31	17	38	3	14
Non-resident	45	69	27	61	18	86

Strathcona County has been building capacity to better address rural traffic safety over the last few years and has taken some important steps in doing so. Further action is needed. This plan has identified 21 actions which have been chosen to be realistic, sustainable, and actionable by 2027 in support of moving towards our Traffic Safety Strategic Plan vision of eliminating death and serious injury on County roads.

Based on best practice and interdepartmental collaboration the following actions are recommended or planned to improve safety on Strathcona County's rural network:

**Action 1:** Create an Asset Management Plan that will guide investment/maintenance of the County's entire transportation network.

**Action 2:** Update Strathcona County Design and Construction Standards.

**Action 3:** Update Bylaw 02-2017 Transportation System Bylaw.

**Action 4:** Update SER-009-030 Road, Sidewalk, and Parking Lot Network Maintenance Policy.

**Action 5:** Develop a comprehensive, proactive rural roadside vegetation control program that implements a regular maintenance schedule to ensure clear zones along rural roads and ensure adequate sightlines at intersections while causing minimal disruption to bird habitats.

**Action 6:** Update intersection control safety guidelines and ensure the guidelines are included in Strathcona County's Design and Construction Standards.

**Action 7:** As part of a County-wide Active Transportation Plan/Vulnerable Road User Strategy, develop a plan for expansion of active transportation facilities (multi use trails) in the rural area (link to Action 17).

**Action 8:** Consider development of an animal strikes mitigation strategy (link to Action #5).

**Action 9:** Implement roadway departure warnings (edgeline/centreline rumble strips) according to best practice across the rural network with planned rehabilitation.

**Action 10:** Encourage proactive interactions with pedestrians on highways.

**Action 11:** Continue to work closely with engineering partners to build enforcement plans based on data delivered through the Rural Road Safety Plan and Enforcement Services STEP to ensure most effective use of enforcement resources.

**Action 12:** Participate in Immediate Roadside Screening (IRS) Pilot Project.

**Action 13:** Update the STEP Traffic Safety Calendar to reflect findings of rural collision trends and demographics.

**Action 14:** Expand local business and school traffic safety presentations in rural areas.

**Action 15:** Continue to engage with Alberta Transportation to find solutions to the safety concerns on rural highways.

**Action 16:** Seek to engage and develop relationships with engineering and enforcement partners in adjacent rural municipalities (Lamont, Sturgeon, Leduc, Beaver Counties) and explore opportunities to partner on rural safety initiatives and advocacy.

**Action 17:** Leverage the Council struck Traffic Safety and Active Transportation Task Force to develop a Vulnerable Road User/Active Transportation Strategy that covers rural as well as urban safety.

**Action 18:** Explore the opportunity to partner more closely with rural community leagues to distribute rural road safety materials.

**Action 19:** Expand positive ticketing program in Strathcona County, including rural areas.

**Action 20:** Continue to engage with industry partners regarding truck routes and employee traffic management.

**Action 21:** Add additional Fire Station 7 to serve areas north of Yellowhead (planned and scheduled to open in 2027).

## **A. Introduction**

As a specialized municipality, Strathcona County has a large network of rural roads, including 1,314 km of County-maintained rural roads and over 100 km of provincially owned and maintained rural highways.

In the last five years, 33 per cent (2,555) of all reported collisions on a public road in the County happened at a rural location. However, rural collisions tend to be more serious, with 76 per cent of fatal injury and 55 per cent of all major injury collisions in the County during this timeframe happening at a rural location. For this reason, rural traffic safety is a priority in our community.

Strathcona County is always working to improve safety on our entire road network. The purpose of the Rural Road Safety Action Plan (RRSAP) is to focus on initiatives undertaken to improve safety on our rural network, specifically:

- To benchmark the current state of rural road safety in Strathcona County;
- To identify current strategies in place to address rural road safety;
- To identify specific actions to improve rural road safety that are realistic, sustainable and actionable;
- To identify resources needed to improve rural road safety; and
- To identify evaluation indicators that can be used to measure progress towards our overarching traffic safety goals.

Note that recommendations in this RRSAP primarily focus on rural grid roads and highways in Strathcona County, as this is where serious and fatal collisions tend to occur. Actions undertaken as part of Strathcona County's Neighbourhood Traffic Safety Action Plan 2017 focus on improving overall safety and livability on our residential roads in both urban and rural areas.

### **I. Traffic collision data collection and analysis**

Detailed collision data collection and management is the foundation upon which this Rural Road Safety Action Plan is built. Strathcona County has been tracking collision data since the 1980s. In 2013, Strathcona County implemented the Traffic Crash Location System (TCLS) to track crash data in the County. Processes are now in place for data input, data cleansing, and system maintenance. Unless otherwise noted, data used in this report is gathered from Strathcona County's Traffic Crash Location System (TCLS) for the five-year period 2018 to 2022. Collision data is obtained in electronic format through the Government of Alberta's E-Collision system, which is produced by the RCMP and maintained by Strathcona County. There are many collisions that go unreported for a variety of reasons and therefore are not included in this data. There are also many collisions that may have data deficiencies that are inherent in collecting data and maintaining large databases. The database reflects all reported collisions that result in property damage of CAD \$5,000 or greater (CAD \$1,000 prior to January 1, 2011, and CAD \$2,000 prior to January 1, 2024), as well as any collision that results in an 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.

## **II. Development of the Rural Road Safety Action Plan**

Collision data was used to provide up to date statistics regarding the current state of rural road safety in Strathcona County.

The next phase of development for this project included an environmental scan of best practices and relevant provincial, federal, and municipal level (Sustainable Rural Roads Master Plan (SRRMP), Integrated Transportation Master Plan (ITMP)) documents to identify industry trends and ensure alignment.

The interdepartmental Traffic Safety Advisory Team was leveraged to provide multidisciplinary expertise through the formation of this document. Team members were engaged to understand how County policies and programs currently impact rural road safety, and potential actions that the County could explore to improve rural road safety. Emergency Services was also brought in as a partner, as timely emergency response is very challenging in the rural context.

Direct, broad resident engagement was not specifically undertaken for this project. Rather, PE results from the development of the ITMP and SRRMP were used to gather information regarding resident traffic safety concerns and priorities.

Further, Strathcona County is always communicating with rural residents regarding road concerns submitted through County Connect, the Agricultural Service Board, as well as through continuing relationships with rural stakeholder groups. This provides ongoing, current feedback on resident concerns and priorities on rural roads.

The results of this process have resulted in the 21 actions recommended in this plan.

## **B. Current state of rural road safety in Strathcona County**

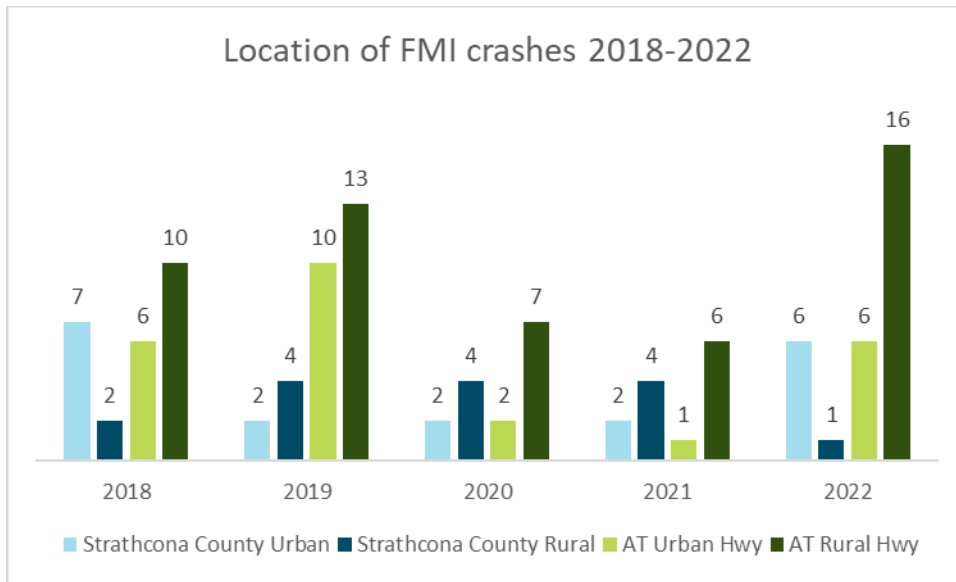
### **I. Frequency and location of rural collisions**

As per our Traffic Safety Strategic Plan 2020 and consistent with the Safe Systems Approach, Strathcona County's goal is to eliminate death and serious injury on our roads. A major injury is defined as one requiring admission to a hospital. Strathcona County's rural roads can be divided broadly into two categories: County owned rural roads (includes rural grid roads and residential roads) and provincially owned (Alberta Transportation and Economic Corridors (ATEC)) rural highways.

#### ***ATEC rural highways***

When fatal and major injury crashes (FMI) are categorized based on road type (See Figure 1), analysis reveals ATEC rural highways experienced the highest proportion of serious collisions every year between 2018 and 2022. In 2022, collisions on rural highways accounted for 55 per cent of FMI crashes in the entire County.

Figure 1: Location of fatal and major injury collisions in the County 2018-2022

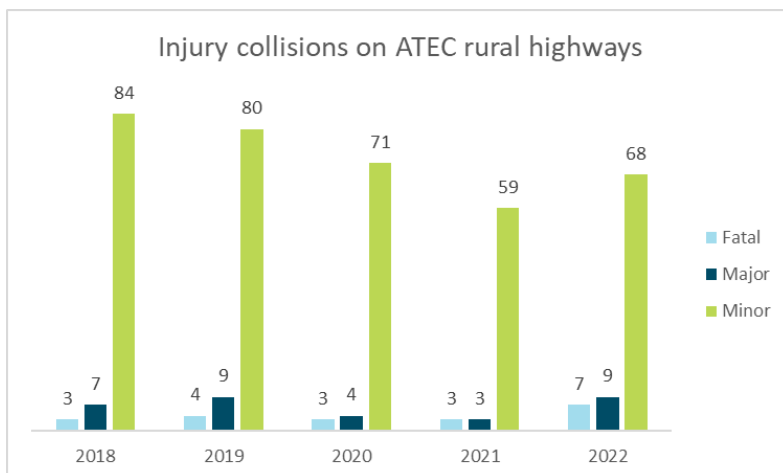


To assess high collision location trends, all ATEC rural highway FMI collisions in the last five years have been mapped in Appendix 1. These maps identify specific areas of concern, mainly in the southern part of the County:

- Highway 16, from Highway 830 to the County boundary
- Highway 21, south of Highway 628 to County boundary
- Highway 14, east of Highway 824 to County boundary
- Highway 14, between Highway 216 and Highway 21
- Highway 630, between Highway 21 and Range Road 222

ATEC rural highways also account for the largest proportion of minor injury collisions on the rural network; 69 per cent (362/526) of rural collisions in the County between 2018 to 2022 happened on ATEC rural highways.

Figure 2: Number of Injury Collisions on ATEC rural highways 2018-2022



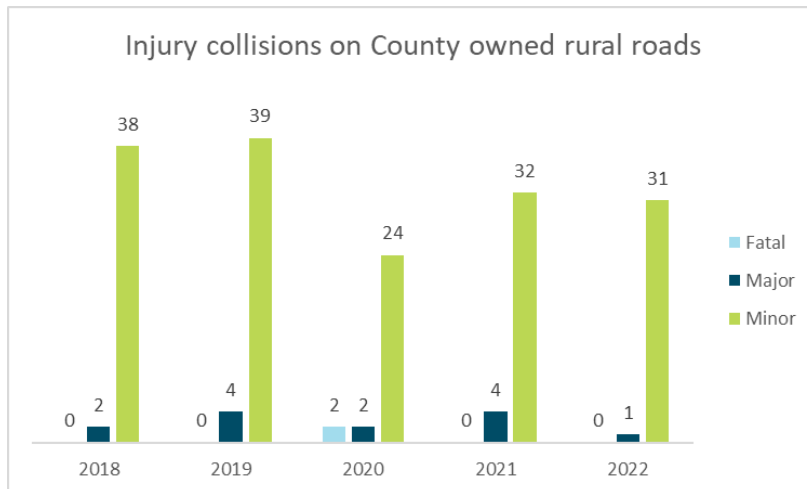


Trend analysis of collisions on ATEC rural highways shows a decrease in FMI collisions in 2020 and 2021, which is likely a result of decreased traffic volumes during the COVID-19 pandemic. In 2022, there was an increase in FMI collisions on rural highways. For minor injury collisions, a slight decrease was seen in 2020 and 2021, with an increase in 2022, but still less than pre-pandemic levels.

### County owned rural roads

County owned rural roads account for a much smaller proportion of FMI collisions (average of 13 per cent between 2018 to 2022); however, given their relatively lower traffic volume, further consideration is still warranted. One hundred sixty-four minor injury collisions were reported on County owned rural roads between 2018 to 2022, in addition to the 15 FMI. All injury collisions are mapped in Appendix 2, with those involving animal strikes (15 per cent) removed for analysis. Generally, there is a slight decreasing trend for minor injury collisions on rural roads. The low number of FMI collisions do not lend themselves to trend analysis.

Figure 3: Number of injury collisions on County owned rural roads 2018-2022



From the map in Appendix 2, higher collision frequencies are seen on:

- Range Road 224, north of Township Road 530
- Township Road 530, between Highway 21 and Range Road 213
- Township Road 514, west of Range Road 231
- Township Road 510
- Range Road 232, south of Wye Road
- Range Road 233, between Wye Road and Highway 628 (this high-volume segment is currently undergoing engineering changes that are intended to improve safety)
- Range Road 231, between Wye Road and Highway 628

All rural FMI collisions on Strathcona County owned roads took place on grid roads; no FMI collisions were reported on a rural residential road from 2018 to 2022.

## II. Types of collisions on rural network

### *Animal strikes*

41 per cent of all collisions reported on the rural network involve an animal. 35 per cent (371/1025) of all collisions reported on County owned rural roads and 46 per cent of those reported on ATEC rural highways involve an animal.

Collisions with animals resulted in one fatality, five major injuries and 134 minor injuries to humans between 2018-2022. All FMI and 76 per cent of minor injury collisions with an animal happened on a provincial highway; 89 per cent of animal collisions in rural areas resulted in property damage only.

81 per cent of the collisions occurred in darkness, and 49 per cent happened between October 1 and December 31. However, only one of the five FMI collisions involving an animal happened between October and December. Two occurred in February, and one each in May, September, and December.

Deer are the most common type of animal strike reported in Strathcona County, accounting for 76 per cent of animal strikes; however, collisions with deer only account for 47 per cent of all injuries attributed to animal strikes and 20 per cent of FMI collisions related to animal strikes. There is no discernable geographical pattern to deer strikes, with collisions reported across the rural network, increasing proportionally on roads with higher volumes of traffic.

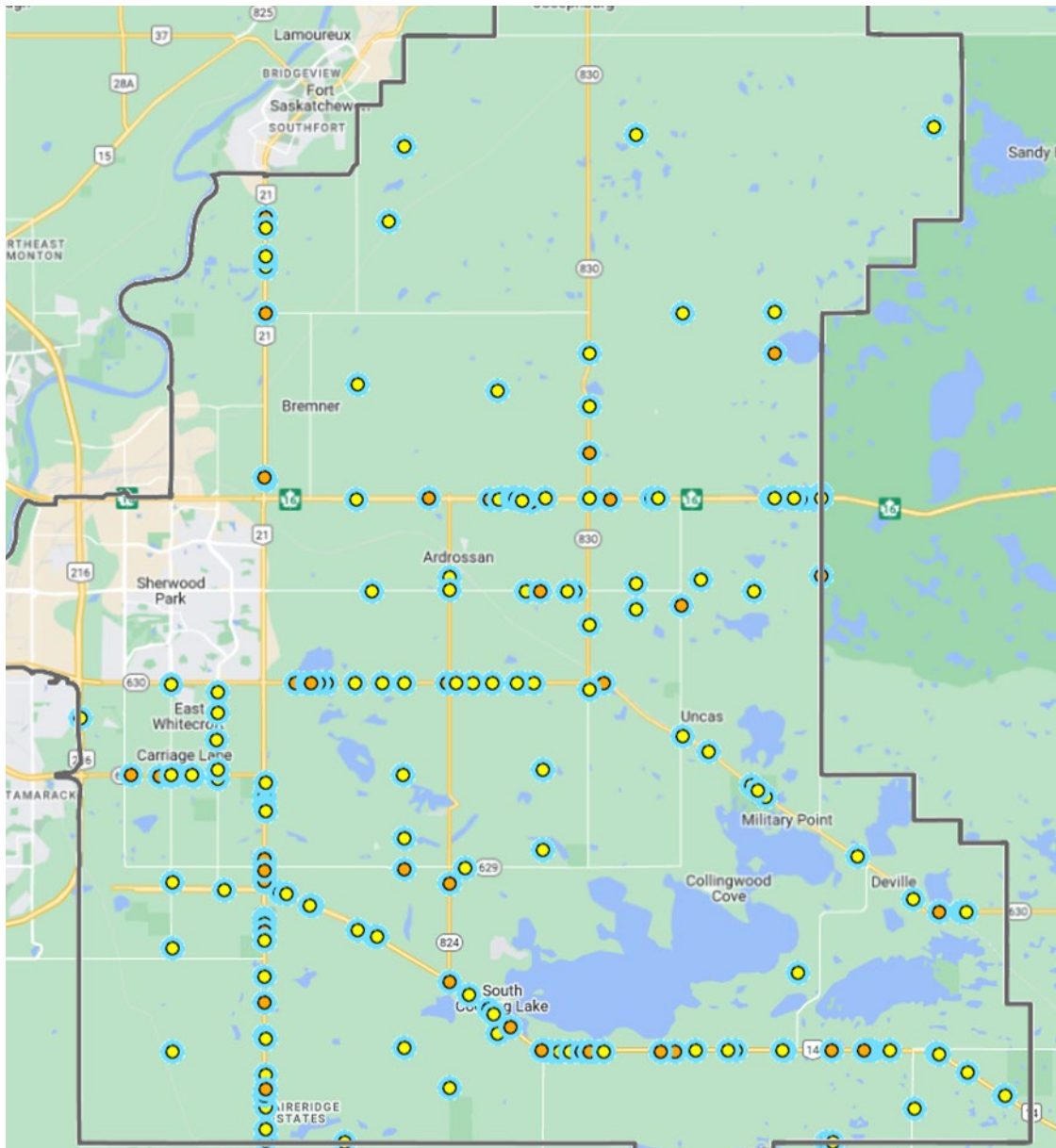
Moose strikes are less common than deer strikes accounting for 18 per cent of animal strikes, but more serious, accounting for 60 per cent of FMIs and 40 per cent of all injuries related to animal strikes. 76 per cent of moose strikes happened on a provincial highway. Some higher frequency locations can be identified:

- Highway 21, between Township Road 540 and Township Road 542.
- Highway 21, south of Township Road 522 to the southern boundary.
- Highway 630, between Highway 21 and Highway 830.
- Highway 16, between Range Road 220 and Range Road 221.
- Highway 16, between Range Road 210 and Range Road 211.
- Highway 14, from Highway 824 to eastern boundary.

43 per cent of all drivers reporting a collision with an animal between 2018 and 2022 in Strathcona County were County residents. Only 35 per cent of drivers who collides with animals on provincial highways were Strathcona County residents. One of five drivers involved in an FMI collision with an animal was a County resident.

66 per cent of drivers involved in a collision with an animal was identified as male. The age of drivers involved in animal strikes ranged from 16 to 87 years old. There was no age group significantly over or underrepresented in collisions.

Figure 4: Moose strikes on County rural roads 2018-2022



### ***Pedestrian collisions***

Pedestrian collisions in rural Strathcona County are very rare, with only five being reported on public roads in the last five years. For analysis, the timeframe was extended to the last ten years (2013-2022) to increase the sample size; there were 11 collisions involving pedestrians in that time frame. Pedestrian collisions tended to be very serious with three resulting in fatality, four in major injury, and four in minor injury to the pedestrian involved.

91 per cent (10/11) of rural pedestrian collisions, including all fatal and 75 per cent (3/4) major injury collisions happened on a rural provincial highway. No other geographic or temporal pattern is noted. Darkness is a significant risk factor, with 7/11 (64 per cent) of all collisions occurring in darkness and 6/7 (86 per cent) FMI collisions occurring in darkness.

All pedestrians involved in collisions were male, and 91 per cent (10/11) drivers (including all involved in FMI collisions) were also male. The one collision on a County owned rural road involved a local 12-year-old pedestrian crossing Range Road 223 to catch a school bus who was struck by a nearby County resident and involved only minor injury. None of the drivers involved in pedestrian collisions on provincial highways were County residents, although two were unidentified. Only 2/10 pedestrians involved in the highway collisions were County residents, and their ages ranged from 23 to 68 years old.

In six collisions, the driver was identified as committing an error. In one case the driver fell asleep and veered into the shoulder, hitting the pedestrian. Two pedestrians were construction workers working on the roadway. In two of the fatal collisions, the pedestrian was walking in the driving lane in the dark. For the other fatal (also in the dark), the collision was a hit and run and unwitnessed, and the pedestrian was found in the driving lane. The condition of all the fatally injured pedestrians was indicated as "unknown".

### ***Cyclist collisions***

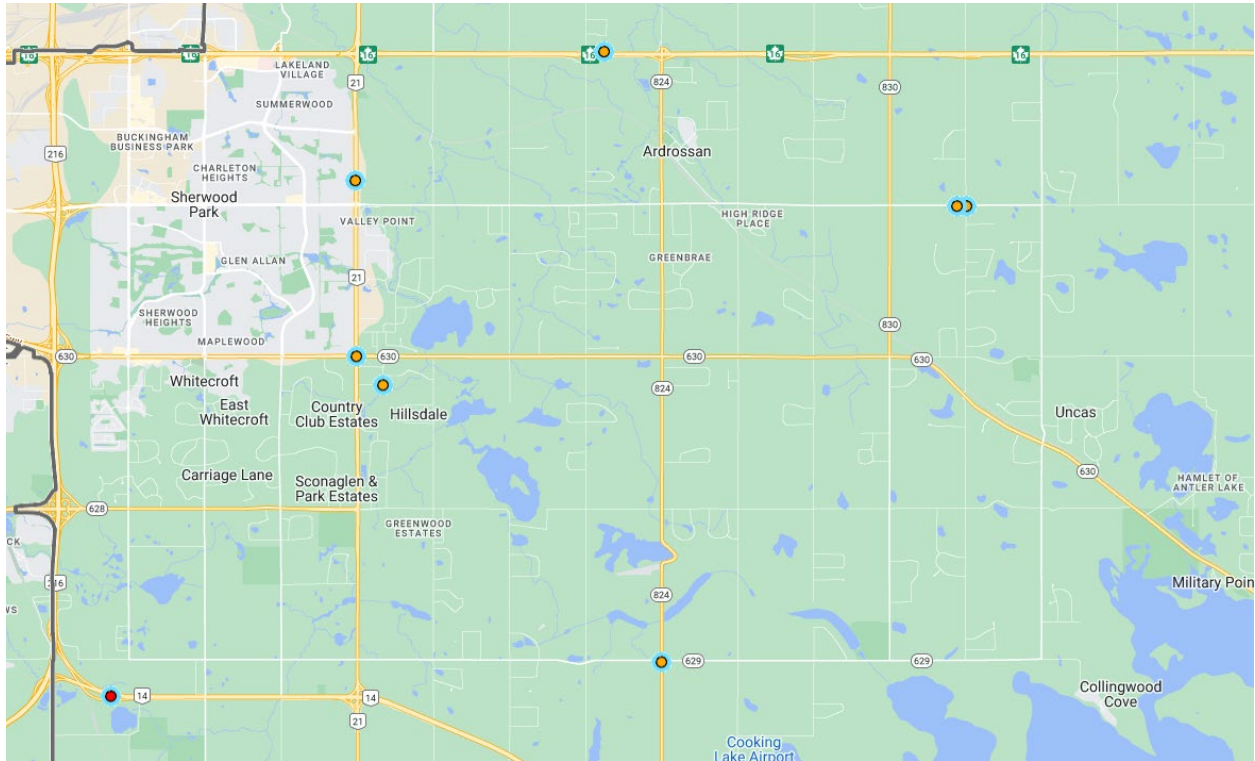
Cyclist collisions in rural Strathcona County are also extremely rare, with only one being reported on public roads in the last five years. For analysis, the timeframe was extended to the last ten years (2013-2022) to increase the sample size; there were eight collisions involving nine cyclists in that time frame. All but one collision, which involved two cyclists, involved a cyclist travelling alone.

Cyclist collisions tended to be serious with one resulting in fatality, three in major injury and four in minor injury to the cyclist involved. Half (4/8) of rural cyclist collisions, including the one fatal collision, happened on a rural provincial highway. For the collisions that happened on a County owned road, one happened on a service road, one occurred on a subdivision road and two happened on Township Road 530 near Range Road 214. The latter three all resulted in major injury to the cyclist. All cycling collisions were on or south of Highway 16 and west of Range Road 213. All collisions happened during daylight conditions.

Unlike pedestrian collisions, parties involved in cycling collisions were most commonly County residents. Seven of nine cyclists injured were County residents, with the remaining two being from Edmonton. Four of the seven drivers involved (one incident involved a parked car) were residents of rural Strathcona County, one was from Edmonton and two were not from the area. All but one cyclist involved in a collision were male, with ages ranging from 23 to 67 years old.

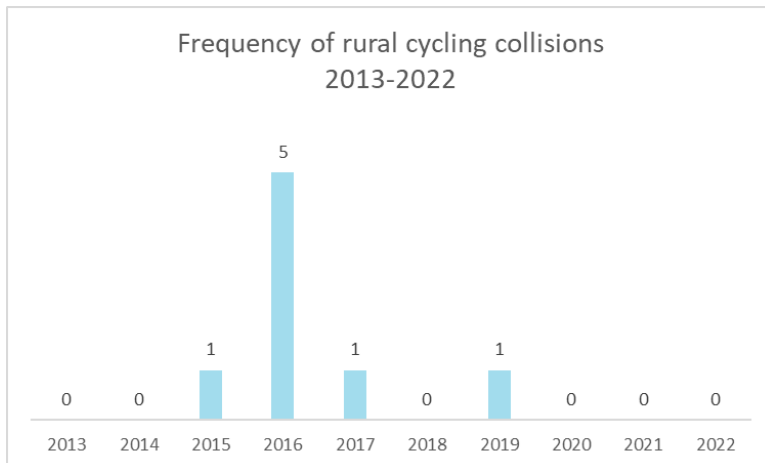
Six of seven drivers involved in cyclist collisions were deemed to be at fault, including all incidents resulting in FMI. The driver involved in the fatal collision was observed driving erratically before the collision and was charged with dangerous operation of a motor vehicle causing death. This driver was not a local resident. All three incidents involving major injury involved rural resident drivers.

Figure 5: Rural collisions involving a cyclist in Strathcona County (2013-2022)



Despite the increase in cycling during the 2020 to 2022 period, there has been a decreasing trend in rural cycling collisions in the County; 2016 saw an uncommonly high incidence of cycling incidents in the rural area.

Figure 6: Frequency of rural collisions involving a cyclist 2013-2022



**Single vehicle collisions**

Single vehicle collisions, which involved only one moving vehicle (excluding animals and pedestrians), accounted for 24 per cent of FMI (16/67), 31 per cent (14/45) of major injury and nine per cent (2/22) of fatal collisions between 2018 and 2022 on rural roads in the

County. 56 per cent happened on rural provincial highways, and 44 per cent on County owned rural roads.

44 per cent (7/16) of single vehicle collisions involved motorcycles. 63 per cent of them took place on dry roads, 31 per cent on snow/slush/ice and six per cent on a loose road surface.

All collisions involved a driver prior action of run off road/lost control except one which involved the driver hitting a hay bale that fell off a preceding vehicle. One involved a driver impaired by alcohol.

### ***Motorcycle collisions***

21 per cent (14/67) of FMI collisions, including nine per cent of fatal collisions (2/22) and 27 per cent (12/45) of major injury, that happened in rural areas of Strathcona County between 2018 and 2022 involved a motorcycle/scooter. Seven of the FMI collisions, including both fatal collisions, happened on a rural provincial highway. Seven happened on County owned roads.

Half (7) of the FMI collisions involving a motorcycle were single vehicle collisions; however, both fatal collisions involved another vehicle where that driver was at fault. Two of the collisions involved alcohol/drugs: one where the motorcyclist had been drinking, and another where the other driver was impaired.

### ***Commercial vehicle collisions***

21 per cent (14/67) of FMI collisions, including 41 per cent of fatal collisions (9/22), that happened in rural areas of Strathcona County between 2018 and 2022 involved a commercial vehicle (defined as a Truck >4500kg or a Truck Tractor as per the Alberta collision reporting form). All but one of these collisions (13/14) happened on a rural provincial highway.

In five of these collisions, one of the vehicles involved was left of center on an undivided highway. Five of the collisions were right angle collisions (four happened at a stop sign and one at a traffic signal). In two collisions, a driver rearended a commercial vehicle (in one case, the truck was parked on the shoulder), and in two a driver proceeding on the wrong side of a divided highway struck a commercial vehicle head on. In 10/14 FMI collisions, the commercial vehicle driver was not at fault.

### ***Collisions involving farm equipment***

Between 2018 to 2022, there was one collision reported that involved a piece of farm equipment in Strathcona County. The property damage only incident involved a collision between an SUV and a lawn tractor being operated by a resident to clear snow on the road in an estate residential subdivision.

Extending the search to ten years, two more farm equipment collisions were reported: one in 2014 on Highway 38 involving a swather struck by a tandem dump truck who was passing unsafely and resulted in property damage only, and one in 2015 involving a backhoe travelling in the right lane on Highway 16 that was rearended by a tractor trailer, resulting in major injury to the backhoe driver.

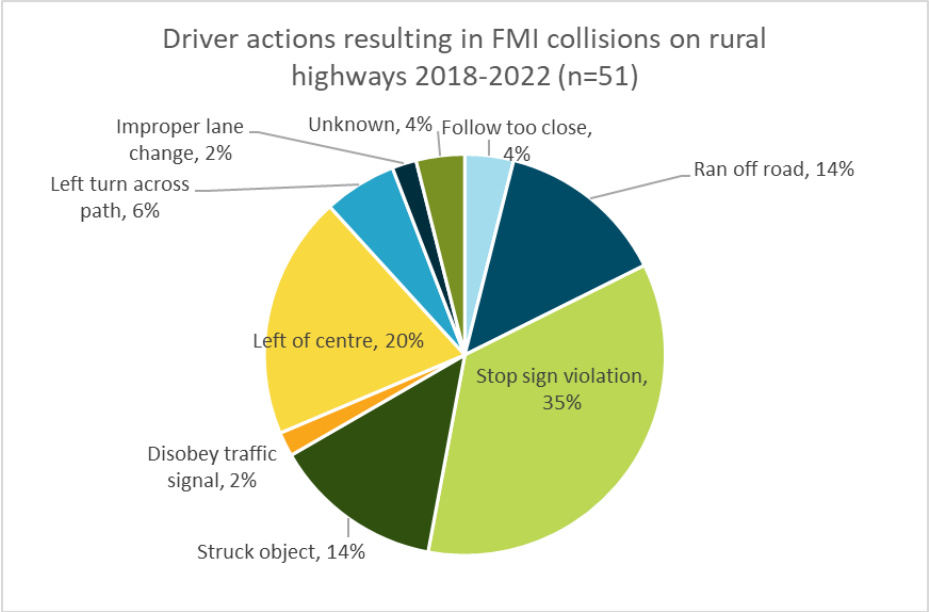
### III. Driver actions and behaviours resulting in FMIs on the rural network

#### Driver actions on rural highways

Understanding driver actions that lead to FMI collisions on rural provincial highways is particularly important given the predominance of injury on these roads.

From Figure 8 below, collisions related to stop sign violations and drivers straying left of center are the most common cause of FMI collisions on rural highways in the last five years. Upon deeper analysis, collisions related to stop sign violations are almost always related to drivers failing to proceed in safety, rather than from drivers completely missing the stop sign.

Figure 7: Driver actions resulting in FMI collisions on rural provincial highways 2018-2022

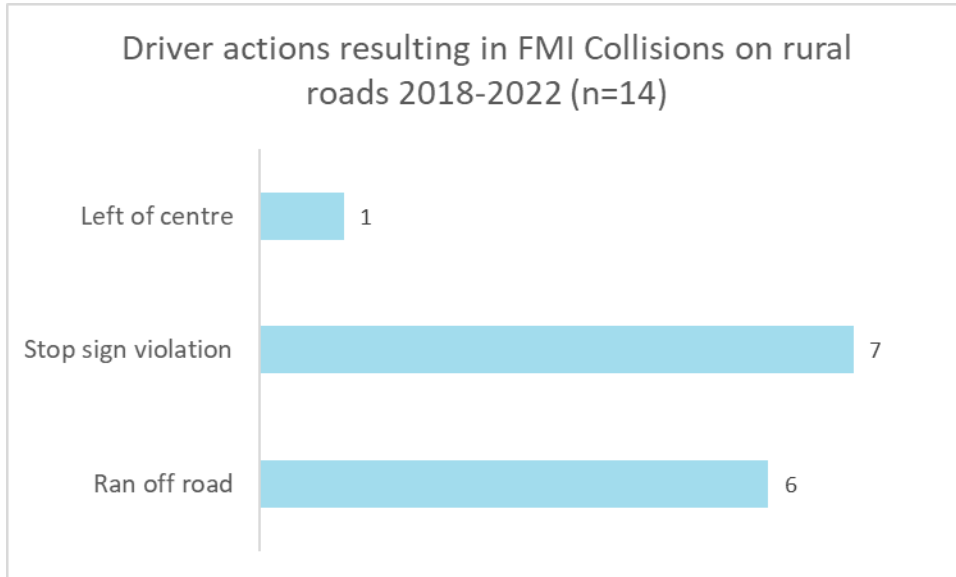


Of the seven struck object collisions, five involved animal strikes, one struck a pedestrian, and one struck a hay bale that fell off a preceding vehicle.

#### Driver actions on Strathcona County owned rural roads

In the last five years, there were 14 FMI collisions on Strathcona County owned rural roads where an improper driver action was reported. The two actions which resulted in the most FMI collisions were stop sign violations and ran off road.

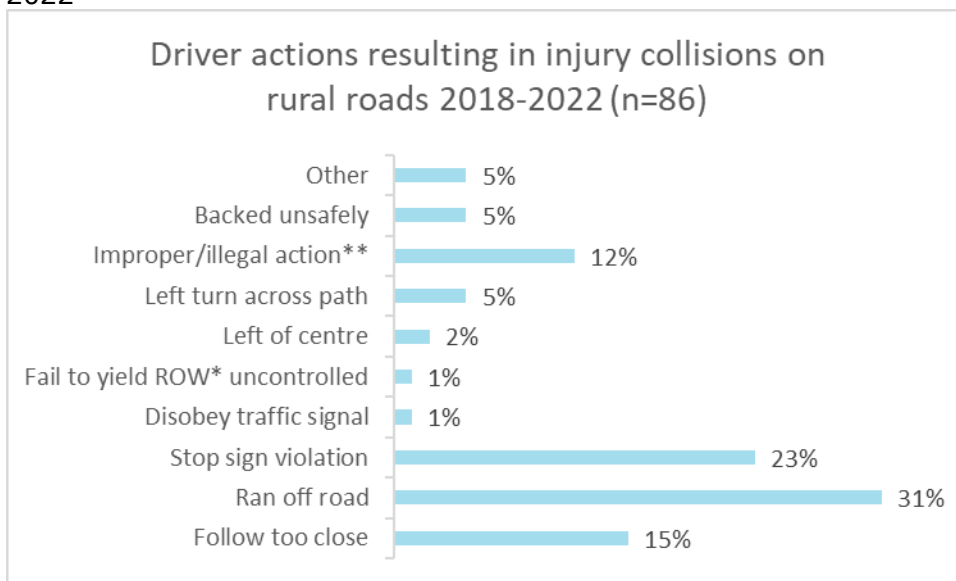
Figure 8: Driver actions resulting in FMI collisions on County owned rural roads 2018-2022



The low number of FMI collisions on rural roads does not lend itself to detailed analysis, so the sample was expanded to include all injury collisions in the last five years.

As seen in Figure 9, two actions led to over half of the injury collisions on the rural network: stop sign violations and ran off road. Detailed analysis of stop sign violations reveals about half occurred when a driver failed to stop, and half when the driver stopped but failed to proceed in safety.

Figure 9: Driver actions resulting in injury collisions on County-owned rural roads 2018-2022



\*\*Includes improper lane changes, turns, passing, U-turns. \*ROW=right-of-way



### ***Impaired driving***

There were four FMI collisions (one fatal, three major injury) reported in the rural area between 2018 to 2022 that involved an impaired driver, accounting for six percent of FMI collisions in the rural area. There were an additional 17 collisions that involved minor injury that are included for analysis.

Fifty-seven percent of these collisions happened on a rural provincial highway, including all four FMI collisions. Sixteen of the incidents involved a driver impaired by alcohol, three involved a driver impaired by drugs and alcohol, and two involved a driver impaired by street drugs.

The age range of drivers varied from 20 to 63 years old, with 33 per cent falling between the ages of 30 to 39 years old. 81 per cent of the impaired drivers were identified as male, including all those involved in FMI collisions.

19 per cent (4/21) of drivers were from Sherwood Park. Five were from Edmonton, three from Fort Saskatchewan, six from other rural Alberta towns and three from out of province.

### ***Fatigued/asleep drivers***

There was one rural FMI collision attributed to a fatigued/asleep driver between 2018 to 2022. This was a major injury collision on Highway 628. When the search was extended to include all injury collisions, a further eight minor injury collisions involving a fatigued/asleep driver were identified. This low number does not lend itself to detailed analysis and suggests fatigued/asleep drivers were not a significant safety issue on Strathcona County's rural network.

### ***Restraint use***

Between 2018 to 2022, there were seven injury collisions on rural roads where one or more motor vehicle occupants were identified as being unrestrained (excluding buses). One of the collisions resulted in a fatal injury to an unrestrained occupant on a rural provincial highway, accounting for five percent of fatal collisions in the five-year period. Two of the collisions resulted in a major injury to an unrestrained occupant, accounting for four percent of major injury collisions in this timeframe. Four of the collisions resulted in a minor injury to an unbelted occupant. This low number does not lend itself to further detailed analysis.

## **IV. Demographics of at-fault drivers in FMI collisions on the rural network**

This section will examine actions of drivers whose prior action was anything other than "Driving Properly" on the collision report with the purpose of identifying common driver errors that may benefit from intervention (enforcement, education, engagement, engineering). For the purposes of this report and brevity, the term "at-fault" drivers will be used, with the recognition that our goal is not to assign blame, but rather to understand weak links in the system. Ideally, a safe system is forgiving of driver error, therefore reducing the severity of the resulting collision to the people involved.

### Gender

Men are more likely to be involved in serious collisions in the rural area. 80 per cent of at-fault drivers in FMI collisions were identified as male and 20 per cent as female. When analysis is limited to fatal collisions 86 per cent were identified as male.

### Age

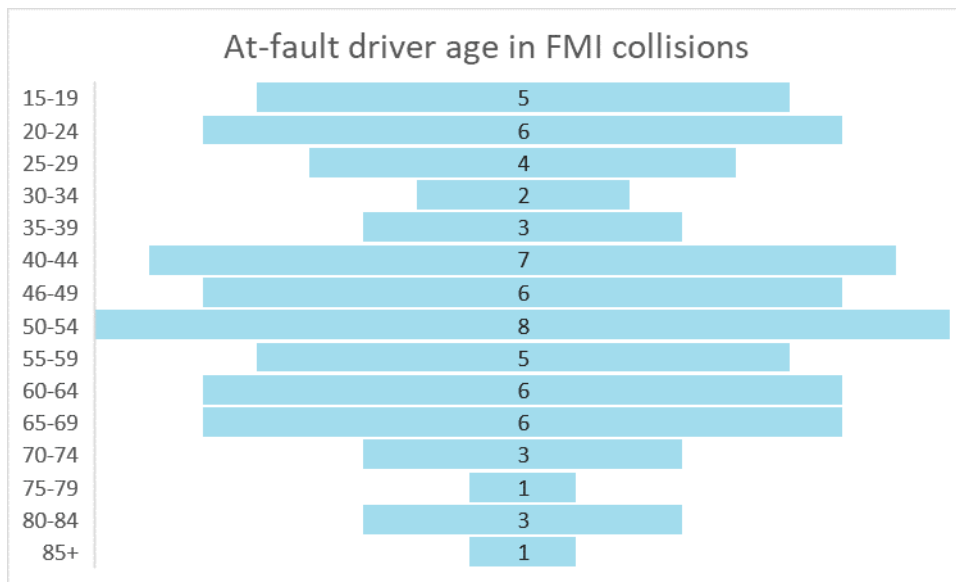
The age of at-fault drivers in FMI collisions (n=66) in the last five years ranged from 16 to 91. Drivers 30 to 39 were less likely to be involved in an FMI collision than those 15 to 29 or 40 to 69 years. Drivers 70 years and older were overrepresented in fatal collisions-

The average age of at-fault drivers in FMI collisions is higher in the rural areas than in the urban areas. Some of this difference may reflect the relative aging of Alberta rural areas compared to the Edmonton Census Metropolitan Area (CMA).

Table 2: Average age of at-fault drivers in FMI collisions by road type 2018-2022

All FMI collisions	SC urban	ATEC urban	SC rural	ATEC-Rural
45.6 years	41.8 years	40.6 years	45.6 years	49.1 years

Figure 10: Age of at-fault drivers involved in FMI collisions in rural areas of Strathcona County 2018-2022



### Residence

The majority of at-fault drivers in FMI collisions in rural areas are not County residents. This is especially true for fatal collisions, where only 14 per cent of drivers resided in the County. All FMI collisions on County owned rural roads involved drivers local to the region (see Figure 11). FMI collisions on rural highways tend to involve drivers from a variety of locations, with 42 per cent of at-fault drivers residing in a more distant rural community (such as Ponoka, Rley, Breton) or out of province. Where residents of Strathcona County were at-fault in an FMI collision in rural Strathcona County, most were rural County residents.

Figure 11: Residence of at-fault drivers involved in FMI collisions on County owned rural roads 2018-2022

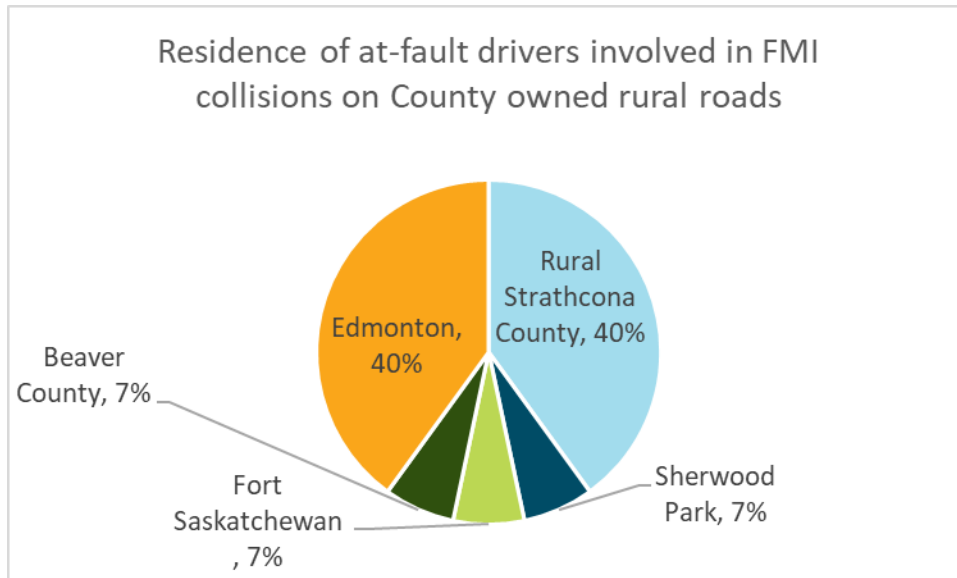
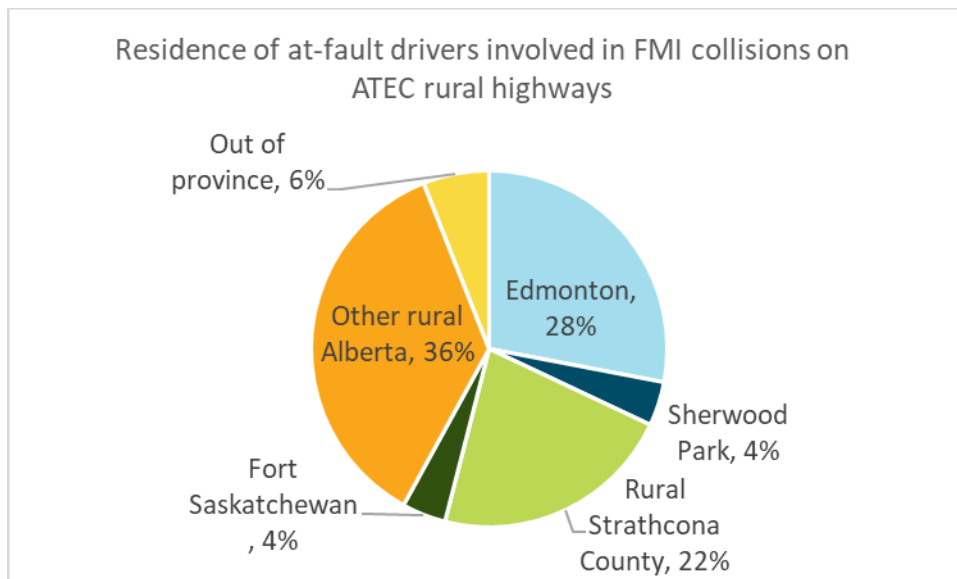


Figure 12: Residence of at-fault drivers involved in FMI collisions on provincial rural highways 2018-2022



## V. Resident concerns in rural areas

Resident engagement regarding traffic safety in rural areas of Strathcona County was not specifically undertaken for development of this action plan; alternatively, results of recent resident engagements for the development of the Sustainable Rural Roads Master Plan (SRRMP 2021) and the Integrated Transportation Master Plan (ITMP 2022) were reviewed to understand rural road safety priorities and concerns.

### ***ITMP engagement***

Resident engagement through the ITMP consisted of discussion boards, focus groups and two online surveys. Overall, safety was the top priority for the transportation network, including rural roads.

For the rural areas, safety concerns mostly stemmed from the competing uses on rural roads. Several cyclists reported feeling unsafe on roadways as vehicles are not properly passing them, especially on rural roads. Drivers, on the other hand, felt there is the potential for serious collisions when encountering cyclists on rural roadways. Recreational cyclists were viewed as taking risks by not following the rules of the road, thus endangering themselves and others. The cyclists were seen as non-sympathetic to local residents and their fears when trying to share the road with cyclists.

Members of the Agriculture Service Board (ASB), an advisory body that assists Strathcona County Council and the Minister responsible for the Agricultural Service Board Act, in matters of mutual concern, were engaged for a focus group during ITMP development. The Board is comprised of citizens and elected officials and provides advice and guidance on topics that may impact rural residents.

Participants were generally very happy with the current state of the transportation system and praised the quality of many rural roadways. They acknowledged that they are one of the only jurisdictions with a majority of paved roads rather than gravel in rural areas. However, participants felt that urban and country residential users may not understand the need for farm operations to move equipment on rural roadways. Participants agreed that the result of these conflict points present significant safety issues. Participants often felt disrespected by other road users.<sup>1</sup>

### ***SRRMP engagement***

There were two phases to the public engagement. The first phase occurred in November and December of 2019 and was designed to engage rural residents and stakeholders at a "Listen and Learn" level regarding traffic safety and road maintenance concerns. This included an online survey and six open houses in rural hamlets (Ardrossan, Antler Lake, Hastings Lake, Josephburg (2), South Cooking Lake)

The public generally felt satisfied and safe on the road network throughout the County. However, several concerns were raised:

- Cyclist conflict with motor vehicles sharing the road was a common topic of concern (for both cyclists and motor vehicle drivers).
- When applying class of road travelled on with satisfaction levels and feeling of safety, the majority of unsatisfied/unsafe respondents primarily drive on Class II roadways.
- Snow clearing, both techniques used and speed of clearing.

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<sup>1</sup> Full details of the public engagement for the ITMP are available at <https://www.strathcona.ca/council-county/plans-and-reports/strategic-documents/transportation-roads/integrated-transportation-master-plan/>

- Maintenance and lifecycle of patches and pothole repairs.
- Size and visibility of stop signs.
- Large vehicles, both number of vehicles and short cutting on narrow rural roads.
- Trees limiting visibility.
- Railway crossings.
- Speeding and lack of enforcement.
- The condition and feeling of safety on provincial highways, most notably Highway 824 between Highway 14 and Highway 630.

The input from this phase was used to gain an understanding of how residents felt about the rural road network, the review and assessment of maintenance practices, classification, and prioritization criteria. The second phase of the public engagement in April and May of 2021 was used to report back to the public on the 2019 SRRMP engagement, what was heard and how it was used to inform recommendations.<sup>2</sup>

### **C. Research and trends in rural road safety**

In a 2020 literature review examining rural road safety in Australia and Canada, all studies (n=43) indicated that those living in rural and remote areas were at higher risk of MVC fatalities in comparison to their urban counterparts; Canadian studies indicated rural residents are 2.55 to 5.40 times more likely to die in a collision compared to an urban resident in Canada.<sup>3</sup>

An Australian study on risk safety perception found drivers perceive rural roads to be less risky than urban roads, and they concluded that not only the presence of the risk, but also the perception of risk, influences rural road safety.<sup>4</sup>

In the Fall of 2019, Strathcona County retained Al-Terra Engineering Ltd. to review the Sustainable Rural Roads Master Plan 2010 and to develop the Sustainable Rural Roads Master Plan 2021. To develop the report and recommendations the following key tasks were undertaken:

- Technical review committee was assembled that was comprised of the project team and key County staff. The objective of the committee was to provide information regarding the current transportation maintenance and rehabilitation strategies, assist in the study planning process, provide advice, review technical challenges, and assist in formulating the study recommendations.

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<sup>2</sup> Full details of the public engagement for the SRRMP are available at <https://www.strathcona.ca/council-county/plans-and-reports/strategic-documents/transportation-roads/sustainable-rural-roads-master-plan/>

<sup>3</sup> Comparing rural traffic safety in Canada and Australia: a scoping review of the literature (2022) available at <https://www.rrh.org.au/journal/article/7403>

<sup>4</sup> Risk and safety perception on urban and rural roads: Effects of environmental features, driver age and risk sensitivity (2017) available at <https://pubmed.ncbi.nlm.nih.gov/28436735/>

- Current state analysis of the existing road network was conducted. This involved reviewing the current design standards, budget allocations and analyzing the existing road condition database for traffic volumes, road width, and surface type.
- A review of the current maintenance and rehabilitation practices was completed. The review looked at the current practices being utilized by the County for the various road surface types.
- Road safety program was reviewed, and short and long-term options were provided for collision mitigation strategies.
- A public engagement process was undertaken to understand resident priorities and concerns.
- A value analysis workshop was held and was attended by the project team, County staff, staff from neighbouring municipalities, and experts from outside consultants and contractors. The goal of the workshop was to identify innovative ways to develop, maintain, rehabilitate, and upgrade the rural roads in the County and provide the project team with options for further investigation.

The ITMP update was developed through a three-phase approach between January 2021 and June 2022 and incorporated several streams of technical evaluation and extensive stakeholder engagement to develop a plan that will guide transportation planning and infrastructure investments over the next 25 years. Development of the ITMP included review of County and regional policies including:

- Municipal Development Plan (MDP) (2017)
- Strategic Plan (2013-2030)
- Corporate Business Plan (2022-2025)
- Integrated Transportation Master Plan (2012)
- Traffic Safety Strategic Plan (2014)
- Transit Master Plan (2019)
- Sustainable Rural Roads Master Plan (2021)
- Trails Strategy (2011)
- County Development Plans — Development Plans include Area Structure Plans (ASPs), Area Concept Plans (ACPs), Area Redevelopment Plans (ARPs) and other plans related to future growth and development.
- Social Framework (2017)
- Long-Term Financial Sustainability Framework (2018)
- Environmental Framework (2021)
- Edmonton Metropolitan Region Growth Plan (EMRGP)
- Integrated Regional Transportation Master Plan (IRTMP)
- Neighbouring transportation master plans (Fort Saskatchewan, City of Edmonton, Leduc County, Sturgeon County)
- Alberta Transportation — Provincial initiatives, such as the upgrade of Highway 16 from east of Highway 824 to west of Elk Island National Park, will impact travel through the County and influence the development of the ITMP, including potential partnership and funding opportunities.

Development of the ITMP also integrated information regarding our community profile (demographics, population and employment, land use) and public/stakeholder engagement.

Review of the existing transportation network in the County was undertaken, and future conditions were projected. All of this information taken together resulted in the identification of five priority areas for investment (safety, accessibility, connectivity, efficiency and economy) and associated recommendations.

As such, rather than duplicating the work undertaken for the development of the ITMP and SRRMP, the Rural Road Safety Action Plan relies on the expertise and efforts undertaken to ensure alignment with other County and local policies/plans and best practice in the development of these documents. Many of the actions recommended in this plan directly reflect and align with the recommendations of the ITMP and SRRMP.

A summary of the recommendations of the SRRMP and the ITMP recommendations most relevant to safety on the rural network can be found in Appendix Three.

The expediency and quality of emergency medical services following a serious road collision is a significant determinant of rural fatality rates. Victims of rural road collisions are disadvantaged by the distance to major trauma centres<sup>5</sup>. Trauma care, especially aeromedical retrieval, is a significant secondary prevention strategy<sup>6</sup> in rural locations.

## **D. Current and recommended rural road safety initiatives**

Traffic safety issues are addressed in Strathcona County through engineering, enforcement, education, engagement, evaluation and emergency response.

### **I. Engineering**

Collision data suggests engineering initiatives have the potential to effect very large improvements in rural road safety. Unfortunately, engineering countermeasures to improve safety also tend to be most costly. They also are slower to implement where construction and/or budget approval is necessary, often making them difficult to implement in response to emergent issues.

Included in these engineering initiatives are those related to maintenance. Regular brushing and vegetation control are important to maintain appropriate sightlines. Similarly, road maintenance and surface treatments can help support other safety initiatives.

Strathcona County is also limited by jurisdiction in rural areas, as provincial highways are built, operated, and maintained by the Alberta Transportation and Economic Corridors, including all right of way within 400m of the provincial highway.

#### ***Current engineering initiatives for rural road safety***

The County currently undertakes several initiatives directly related to rural road safety.

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<sup>5</sup> Dinh MM, Curtis K, Mitchell RJ, Bein KJ, Balogh ZJ, Seppelt I, et al. Major trauma mortality in rural and metropolitan NSW, 2009-2014: a retrospective analysis of trauma registry data. *Medical Journal of Australia* 2016; **205(9)**: 403-407. [DOI link](#)

<sup>6</sup> King JC, Franklin RC, Robertson A, Aitken PJ, Elcock MS, Gibbs C, et al. Review article: primary aeromedical retrievals in Australia: an interrogation and search for context. *Emergency Medicine Australasia* 2019; **31(6)**: 916-929. [DOI link](#)

Table 1: Current engineering initiatives to improve rural road safety

Initiative	Details
In-Service Road Safety Reviews (ISRSR)	An ISRSR is a formalized, multidisciplinary review to address safety of all road users at crash-prone locations identified through annual network screening. An ISRSR may result in the implementation any of the initiatives outlined in this Action Plan.
Road Safety Audits	The County has formal requirements for independent third- party RSAs during the plan and design phase of new arterial and rural grid roads.
Traffic Control Signage	Upgraded traffic control signage (including flashing beacons and oversized signs) are used in areas of concern.
SER-001-006 Rural Roadside Vegetation Control Policy	“Brushing” is done by County crews all year on an emergent (i.e.. sightline concern) or emergency (i.e.. fallen tree) basis. From October to December, crews work to remove woody material in the ditch on roads that are planned for construction the following year.
Roadside Barriers, curve warnings, centreline markings	These are implemented based on TAC/AT standards
Communication with Emergency Services and RCMP and Enforcement Services through Traffic Disruption Calendar	Our teams collaborate so first responders receive real-time updates on road closures and construction to minimize delays as crews navigate to traffic collisions.
Illumination	SER-009-012- Street Lighting ensures illumination at our intersections is guided by best practice. TAC standards are used as a decision-making guide for rural grid roads.
SER-009-026 Winter Maintenance Policy – Roads, Sidewalks, and Parking Lots	Winter maintenance in Strathcona County is guided by this policy to ensure an acceptable standard of snow clearing and ice control on all roads and sidewalks, including those in the rural area.
SER-009-030 Road, Sidewalk, and Parking Lot Network Maintenance	This policy sets out the minimum level of maintenance service that will be provided on each classification of roadway, parking lots and sidewalks within the County, including rural areas. This policy was updated in 2022 to reflect feedback in SRRMP and additional public engagement regarding trail and sidewalk clearing.
SER-014-005 Asset Management Policy	The Corporate Asset Management Policy identifies risk management as a guiding principle.

### ***Recommended Engineering Actions for Rural Road Safety***

Recommendations of the SRRMP and ITMP are reflected in several interrelated engineering actions to improve rural road safety in the County.

#### **Action 1: Create an Asset Management Plan that will guide investment/maintenance of the County’s entire transportation network.**

This action is recommended in both the ITMP and the SRRMP.



From ITMP, "Economy 5. Utilize cost benefit analysis to evaluate the life cycle cost of proposed improvements and maintenance and invest in timely routine maintenance practices to extend the service life of existing roads, sidewalks and trails."

The SRRMP includes several recommendations directly related to this action:

- Site specific engineering and geotechnical work should be performed to identify the proper rehabilitation or maintenance treatment.
- A cost benefit analysis should be used to evaluate the life cycle cost of proposed improvements and maintenance.
- Develop rehabilitation design guidelines is to provide lower cost and lower impact design options to sustainably extend the service life of the existing infrastructure.
- Continue to invest in timely routine interim maintenance practices to increase the design life of existing roads.
- Update road classification nomenclature.
- Update road classifications to divide the Class II roads into a rural major collector and rural minor collector.
- Develop a functional classification plan based on the long-term network traffic model.
- Develop a formal Rural Industrial Road functional class.

In order to achieve Action 1, several related actions must be undertaken:

- **Action 2: Update Strathcona County Design and Construction Standards**
- **Action 3: Update Bylaw 02-2017 Transportation System Bylaw**
- **Action 4: Update SER-009-030 Road, Sidewalk, and Parking Lot Network Maintenance Policy**

**Action 5: Develop a comprehensive, proactive rural roadside vegetation control program that implements a regular maintenance schedule to ensure clear zones along rural roads and ensure adequate sightlines at intersections while causing minimal disruption to bird habitats.**

The SRRMP recommends:

- A brushing program should be implemented where trees are cleared at intersections to increase sightlines.
- Keep the right-of-way mowed and clear of trees in animal corridors to reduce animal collisions.

Current County brushing practices had been largely reactive and in support of construction. A proactive program that develops specific guidelines for clear zones along rural roads and clear sightlines at intersections will help to mitigate animal strikes and intersection related crashes. Pushing back vegetation along rural roads could also reduce the amount of emergent and emergency work needed, allowing summertime work to be done without impacting bird breeding habitat and allow for more orderly and effective use of brushing resources.

This program will also decrease the number of grass fires experienced in County ditches, secondary to cigarette butts and sparks from vehicles. Reducing the number of resources

needed to fight grass fires will allow more resources to be redirected to other emergency responses.

**Action 6: Update intersection control safety guidelines and ensure the guidelines are included in Strathcona County's Design and Construction Standards**

These actions are recommended in the SRRMP:

- Implement guidelines for additional safety measures at rural stop-controlled intersections.
- Consider rural roundabouts as potential intersection treatments.

Strathcona County currently uses a safety matrix for choosing stop control at rural intersections. However, this is an internal document only. Updating the document to reflect recommendations in the SRRMP and ensuring development also follows these guidelines will ensure a more consistent application across the County.

**Action 7: As part of a County-wide Active Transportation Plan/Vulnerable Road User Strategy, develop a plan for expansion of active transportation facilities (multi use trails) in the rural area (link to Action 17).**

Creation of an Active Transportation Plan/Vulnerable Road User Strategy is consistent with the following priorities of the ITMP:

- Safety 1. Provide a safe and inclusive transportation experience for all users of the transportation system, regardless of their transportation choice.
- Accessibility 4. Continue to invest in active transportation infrastructure that is accessible to all transportation network users and integrated with other transportation modes.
- Connectivity 5. Identify opportunities to enhance transportation connections to, from and within the rural service area to access employment areas, services, and destinations.

An Active Transportation Strategy is also required by our Municipal Development Plan<sup>7</sup>

**Action 8: Consider development of an animal strikes mitigation strategy (link to Action 5)**

There is a growing body of information regarding the mitigation of animal strikes, including cost/benefit analysis. Perform a close review of best practice and County collision trends to determine whether increased investment in mitigation of animal strikes (beyond improved rural roadside vegetation control) is appropriate in the County's context.

**Action 9: Implement roadway departure warnings (edgeline/centreline rumble strips) according to best practice across the rural network with planned rehabilitation.**

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<sup>7</sup> Section 3: General Policy Sections 3.4 Transportation, p.23. Available at <https://storagecdn.strathcona.ca/files/files/pds-mdp-3-general-policy-sections.pdf>

## II. Enforcement

Enforcement initiatives to improve rural road safety are challenging due to the sheer size of our rural area. Looking to patterns of driver actions involved in collisions and high crash locations can help to target limited resources to locations where they are most likely to effect change.

### *Current enforcement initiatives for rural road safety*

Table 2: Current enforcement initiatives to improve rural road safety

Initiative	Details
Rural patrols	RCMP and Enforcement Services regularly perform proactive patrols in rural areas.
Strategic Traffic Enforcement Plan (STEP)	A STEP is developed each year to guide traffic safety enforcement to priority areas developed based on resident concerns and collision data.
Project TENSOR (Traffic Enforcement for Noise and Speed Offence Reduction) East	TENSOR is generally launched during the summer months and was developed to tackle noisy vehicles. There has been a trend observed that with this noise comes erratic, unsafe driving behavior along with speeding and vehicle equipment violations.
Commercial Vehicle JFO	2023 saw the first deployment of Strathcona County’s commercial vehicle joint force operations. These operations saw agencies from all over Alberta attend Strathcona County to focus on both urban and rural settings where commercial vehicle safety concerns have been identified.

### *Recommended enforcement actions for rural road safety*

#### **Action 10: Encourage proactive interactions with pedestrians on highways.**

Enforcement Services recognizes the concern around statistics on pedestrian collisions and fatalities within Strathcona County. While specifically monitoring highways for pedestrians is not feasible, RCMP and Enforcement Services will increase officer awareness and encourage proactive interactions when pedestrians are encountered on highways to try to provide any assistance to increase safety both for the pedestrian and highway users.

#### **Action 11: Continue to work closely with engineering partners to build enforcement plans based on data delivered through the Rural Road Safety Plan and Enforcement Services STEP to ensure most effective use of enforcement resources.**

### *Planned enforcement actions for rural road safety*

#### **Action 12: Participate in Immediate Roadside Screening (IRS) Pilot Project**

Enforcement Services is currently awaiting approval to become the first Peace Officer pilot project in the Province for IRS as it relates to impaired driving. This will enhance our ability to monitor both rural and urban area for impaired driving.

### III. Education

Education can be used to raise road user awareness of rural road safety. Education is most effective when paired with other engineering, enforcement and/or engagement initiatives.

#### *Current education initiatives for rural road safety*

Table 3: Current education initiatives to improve rural road safety

Initiative	Details
Strategic Traffic Enforcement Plan	Includes a media campaign each month specific to driver safety, driver dos and don'ts, and other related traffic safety initiatives. The County's messages are often in alignment with and supported by Provincial campaigns throughout the year.
Local business and School Presentations	Presentations to students and businesses have been occurring for TENSOR, vehicle equipment, commercial vehicle, and other community projects.
Driver feedback signs and educational signs	Driver feedback signs and educational signs are available for use on the rural network on request. Educational signs include rural specific topics such as Share the Road and Flashing School Bus Lights.

#### *Recommended Education Actions for Rural Road Safety*

**Action 13: Update the STEP Traffic Safety Calendar to reflect findings of rural collision trends and demographics.**

Continue to explore innovative ways to educate residents that are more impactful and engaging.

**Action 14: Expand local business and school traffic safety presentations in rural areas.**

Enforcement Services currently delivers presentations on several topics, this action will focus on providing more presentations while incorporating rural road safety topics (Link to Actions 13 and Action 18).

### IV. Engagement

Strathcona County lies within the Edmonton Metro Region. Drivers in the region frequently cross municipal boundaries and are often involved in crashes in our rural area. Thus, working with local partners is imperative to forward best practice and encourage the implementation of consistent practices in rural road safety across the region.

***Current engagement initiatives for rural road safety***

Table 4: Current engagement initiatives to improve rural road safety

Initiative	Details
Strathcona County School Traffic Safety Partnership	Through the STSP, the County (engineering and enforcement partners) collaborates with student transportation partners and rural school administrators to consider bus and school safety in rural areas.
Rural contact offices	Strathcona County operates two rural contact offices: one in Josephburg and one in South Cooking Lake. These offices are leveraged to distribute traffic safety information and communications when required.

***Recommended engagement actions for rural road safety***

**Action 15: Continue to engage with Alberta Transportation to find solutions to the safety concerns on rural highways, especially at rural road intersections.**

**Action 16: Seek to engage and develop relationships with engineering and enforcement partners in adjacent rural municipalities (Lamont, Sturgeon, Leduc, Beaver Counties) and explore opportunities to partner on rural safety initiatives and advocacy.**

The SRRMP recommends:

- County staff should develop a regular communication and information sharing program with neighboring municipalities.

Many drivers involved in collisions on our rural network live in adjacent rural communities. While we are involved in safety partnership with urban partners through CRISP, we don't have the same communication and relationships with our rural neighbors.

**Action 17: Leverage the Council struck Traffic Safety and Active Transportation Task Force to develop a Vulnerable Road User/Active Transportation Strategy that covers rural as well as urban safety.**

**Action 18: Explore the opportunity to partner more closely with rural community leagues to distribute rural road safety materials.**

**Action 19: Expand positive ticketing program in Strathcona County, including rural areas.**

Enforcement Services has engaged in some positive ticketing in the past, particularly with regards to cyclist safety in the urban service area. In 2024, Enforcement Services will be expanding this practice, both geographically, to encompass both urban and rural areas, as well as across a greater number of safety topics, including cycling, pedestrian, and off-highway vehicle safety (link to Action 13).

**Action 20: Continue to engage with industry partners regarding truck routes and employee traffic management.**

The SRRMP recommends:

- Industry partners should be engaged about directing their employees to use specific routes for employees and trucks.

As home to the Industrial Heartland, Strathcona County has a large proportion of heavy trucks. Ensuring trucks choose appropriate routes as well as ensuring traffic travelling to the Heartland use the road network as intended has the potential to improve both resident satisfaction and collision statistics.

## **V. Emergency response**

Emergency response following a road collision is a particularly important factor to consider in rural crashes. Strathcona County Emergency Services includes over 160 professionals who are cross trained as paramedics and firefighters. In 2023, ambulance service provided by Strathcona County (who operate under contract to Alberta Health Services) achieved a score of over 99 per cent from an independent third-party national accreditation assessment, recognizing their commitment to providing the highest level of patient care possible.

***Current emergency response initiatives for rural road safety***

Table 5: Current emergency response initiatives to improve rural road safety

Initiative	Details
Upgrade to Next Generation 911 system (NG 9-1-1)	In 2023, Strathcona County was the first municipality in Canada to make the transition to NG 9-1-1. The system gives our emergency communications operators faster access to more accurate data so we can send help quicker, which is particularly important in rural response.
Collaboration with TEO through Traffic disruption communications	Emergency Services receives real-time updates on road closures and construction to minimize delays as crews navigate to emergencies on rural roads.
Rural Fire Stations 2 and 3	The fire stations in South Cooking Lake (Station 2) and Ardrossan (Station 3) afford rural residents the opportunity to support their community by providing initial emergency response to fires, vehicle collisions, and medical emergencies. When an emergency event occurs in the rural service area, career and part time crews are dispatched, ensuring a timely and seamless response. Part-time members receive comprehensive training in firefighting, rescue, and emergency medical procedures. This model improves response times to rural emergencies, builds local emergency response capacity and is a cost-effective use of resources.
Support of STARS Air Ambulance	Each year, Strathcona County provides funding to ensure service will be available from STARS if needed
Advanced Life Support (ALS) Medical First Response and the Community Response Unit Pilot Project	<p>When an ambulance is unavailable or a significant distance from an emergency, SCES fire trucks from career fire stations are equipped and staffed to provide advanced level medical care, including at motor vehicle accidents.</p> <p>The SCES Community Response Unit (CRU) is a two person ALS unit that responds to high acuity fire, rescue, and EMS events in Strathcona County. It provides timely life-saving care to Strathcona residents when the EMS system is stretched or overwhelmed. This pilot project is being considered by the province as a potential solution to EMS system challenges and helps ensure that victims of collisions in rural Strathcona County receive timely advanced level care.</p>

***Planned emergency response actions for rural road safety***

**Action #21: Add additional Fire Station to serve areas north of Yellowhead**

Planning and funding are in place for a new full time Fire Station 7 in Cambrian. The station is scheduled to open in 2027 and will provide more effective “First Due” response to areas north of Yellowhead in Strathcona County.

## VI. Evaluation

Evaluation of individual initiatives as well as our overall progress towards our collision reduction goals is crucial to the success of this plan.

### *Evaluation initiatives for rural road safety*

Table 6: Evaluation initiatives to improve rural road safety

Initiative	Details
Network screening	Each year, collision data is mined to determine high collision locations and areas of concern across both the urban and rural service area.
Proactive patrol data entry via ArcGIS	This year, Enforcement Services is migrating CPOs from using ESMART via a web browser to using ESMART via the ArcGIS Field Maps app for proactive patrol data entry. CPOs will record each time a proactive patrol is undertaken in rural areas. The ArcGIS app will allow for mapping and visualization of patrols, ensuring coverage of the entire rural area.



Table 6: Deliverables

Action	Deliverable	Expected completion date	Responsible*
<b>Action 1:</b> Create an Asset Management Plan	Asset Management Plan	Ongoing	TEO
<b>Action 2:</b> Update Design and Construction Standards, SRRMP recommendations	Updated Design and Construction Standards	Ongoing	TEO
<b>Action 3:</b> Update Bylaw 02-2017 Transportation System Bylaw	Updated Transportation System Bylaw	TBD	TEO
<b>Action 4:</b> Update SER-009-030 Road, Sidewalk, and Parking Lot Network Maintenance Policy	Updated Road, Sidewalk and Parking Lot Network Maintenance Policy	Ongoing	TEO
<b>Action 5:</b> Develop updated rural roadside vegetation control program	New Rural Roadside Vegetation Control Program	Ongoing	TEO
<b>Action 6:</b> Update rural intersection control guidelines and entrench in Strathcona County's Design and Construction Standards	Updated rural intersection control guidelines and Design and Construction Standards	Q2 2024	TEO
<b>Action 7:</b> Develop Active Transportation Plan/Vulnerable Road User Strategy, including plan for expansion of active transportation facilities in the rural area (link to Action 17).	Active Transportation/Vulnerable Road User Strategy	Q4 2025	TEO
<b>Action 8:</b> Consider development of an animal strikes mitigation strategy (link to Action #5)	Report analyzing cost/benefit of mitigation strategies and a full strategy, if deemed appropriate	Q2 2024	TEO
<b>Action 9:</b> Implement roadway departure warnings (edgeline/centreline rumble strips) according to best practice across the rural network with planned rehabilitation.	Rural road network with appropriately implemented roadway departure warnings	Ongoing	TEO
<b>Action 10:</b> Encourage proactive interactions with pedestrians on highways.	Communication plan with RCMP/Enforcement Services members created and delivered	Q2	RCMP and ES
<b>Action 11:</b> Continue to work closely with engineering partners to build enforcement plans based on data delivered through the Rural Road Safety Plan and Enforcement Services STEP to ensure most effective use of resources.	Ongoing data sharing	Ongoing	TEO/RCMP and ES

\*TEO=Transportation Engineering and Operations; RCMP and ES=RCMP and Enforcement Services

Table 6: Deliverables (continued)

Action	Deliverable	Expected completion date	Responsible*
<b>Action 12:</b> Participate in Immediate Roadside Screening (IRS) Pilot Project	Participation in IRS Pilot Project	Q4 2024	RCMP and ES
<b>Action 13:</b> Update the STEP Traffic Safety Calendar	Updated STEP Traffic Safety Calendar	Q2 2024	RCMP and ES
<b>Action 14:</b> Expand local business and school traffic safety presentations in rural areas.	Presentations to both urban and rural schools and businesses on Traffic Safety.	Initiated and ongoing	RCMP and ES
<b>Action 15:</b> Continue to engage with Alberta Transportation to find solutions to the safety concerns on rural highways.	Maintain ongoing relationships and planning in maintenance and upgrades.	Ongoing	TEO
<b>Action 16:</b> Seek to engage and develop relationships with engineering and enforcement partners in adjacent rural municipalities	Through TSAT, develop a plan to contact appropriate contacts and establish contact.	Q4 2024	RCMP and ES/TEO
<b>Action 17:</b> Leverage the Council struck Traffic Safety and Active Transportation Task Force to develop a Vulnerable Road User/Active Transportation Strategy that covers rural as well as urban safety.	Traffic Safety and Active Transportation Task Force Final Report	Q4 2024	
<b>Action 18:</b> Explore the opportunity to partner more closely with rural community leagues to distribute rural road safety materials.	Reach out to community leagues	Q3 2024	RCMP and ES
<b>Action 19:</b> Expand positive ticketing program in Strathcona County, including rural areas.	Promote positive ticketing through active engagement in both urban and rural Strathcona County.	Q3 2024	RCMP and ES
<b>Action 20:</b> Continue to engage with industry partners regarding truck routes and employee traffic management.	Review of truck routes with input from stakeholders	Initiated and ongoing	TEO/RCMP and ES
<b>Action 21:</b> Add additional Fire Station 7 to serve areas north of Yellowhead	Fully staffed fire hall	Q4 2027	SCES

\*TEO=Transportation Engineering and Operations; RCMP and ES=RCMP and Enforcement Services; SCES=Emergency Services

Strathcona County's Traffic Safety Strategic Plan 2020 establishes our vision for traffic safety: *"no one will be killed or seriously injured while travelling on Strathcona County's road network"*.

To that end, resources must be allocated where serious injuries and fatalities are most likely to occur.

All recommended actions, excepting Action 21, require staff time only to initiate and will be integrated into annual internal workplans. However, Action 1: Create an Asset Management Plan that will guide investment/maintenance of the County's entire transportation network will likely require substantial funding to implement. As recommended by the SRRMP, "to address the backlog in the existing infrastructure deficit the capital budget will need to be significantly increased."

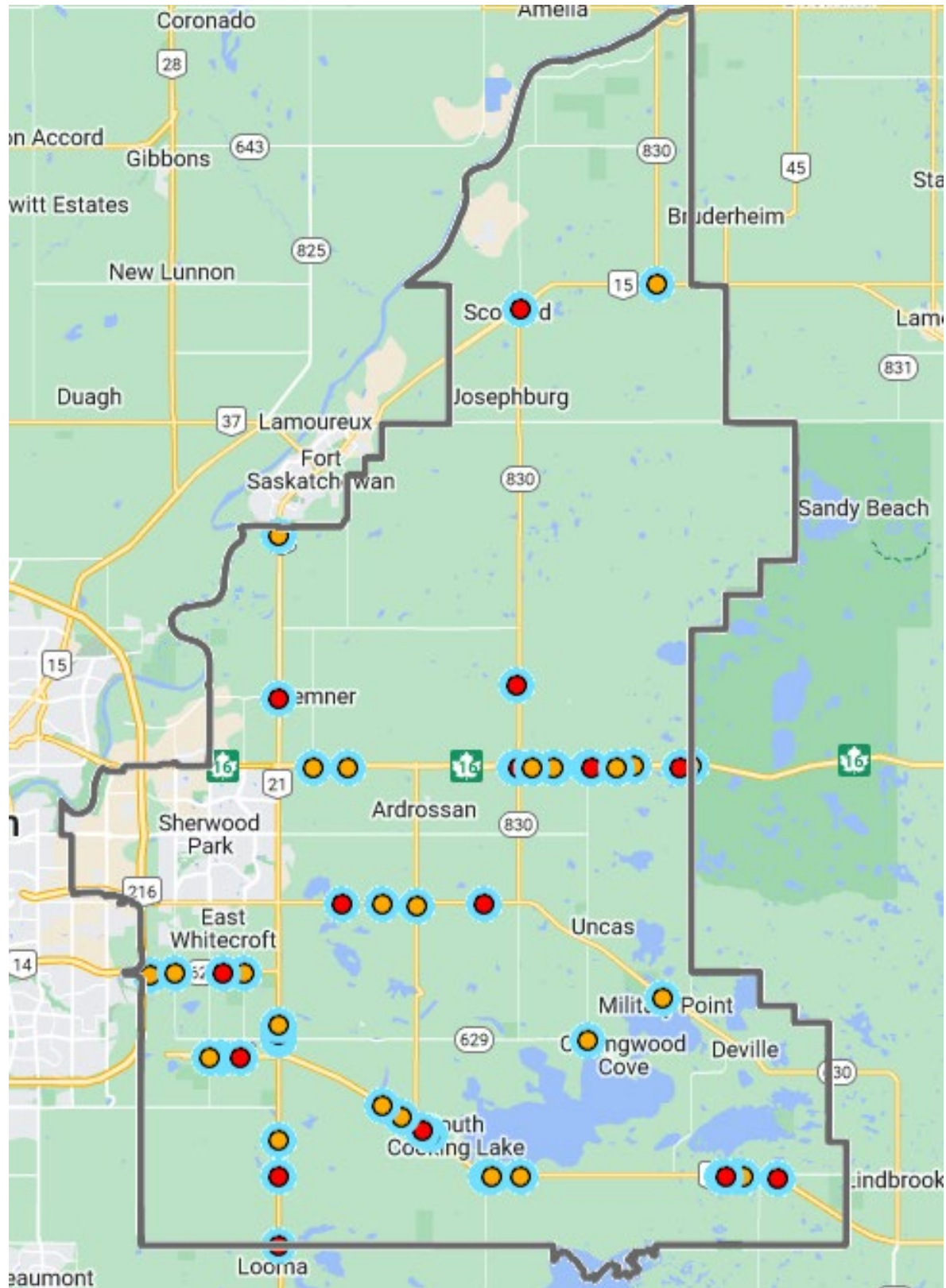
For Action 21, Fire Station 7 has been planned and is already funded in the 2024 budget.

## **F. Conclusion**

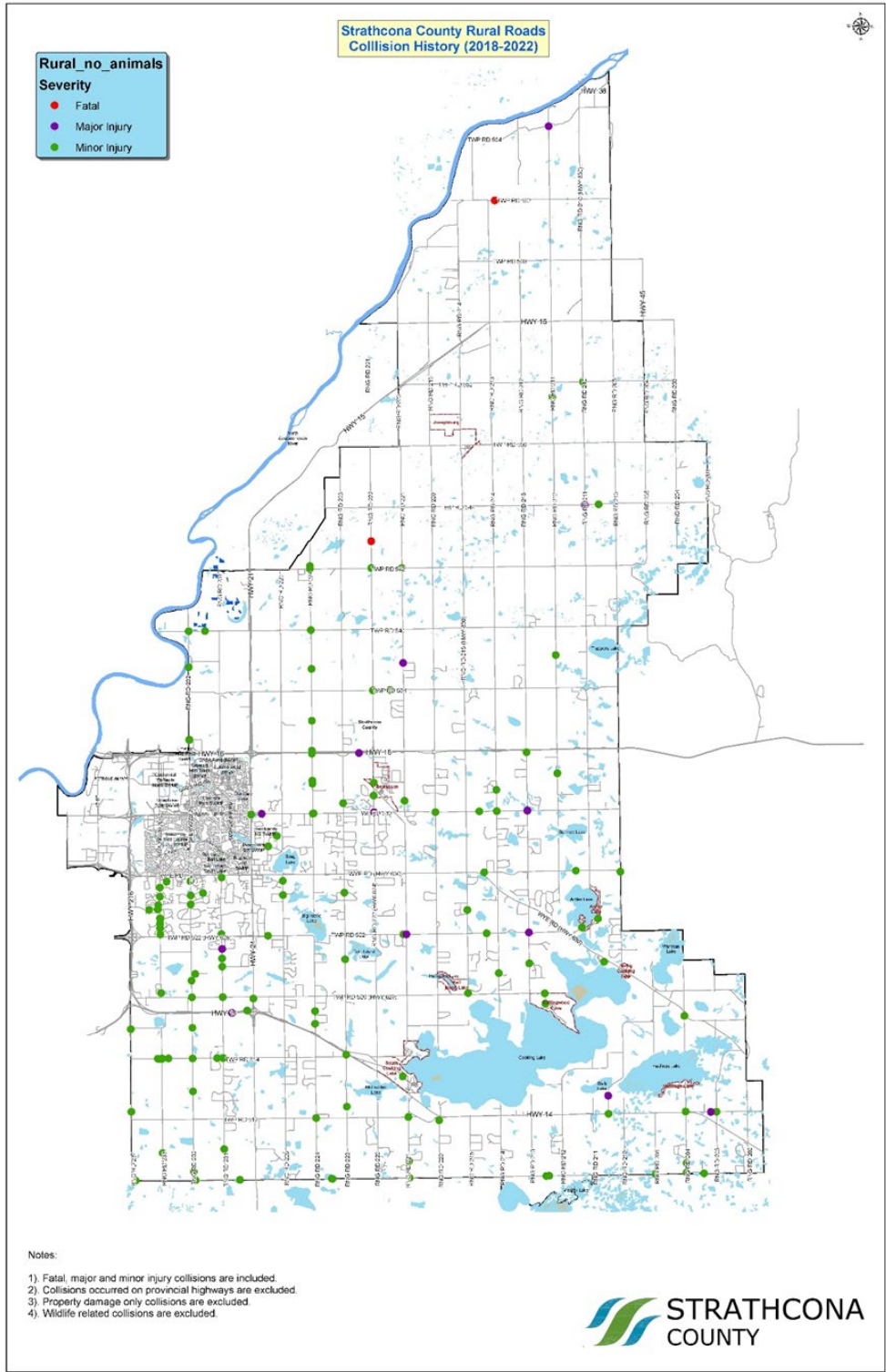
The majority of serious and fatal collisions happen each year in rural areas of Strathcona County.

The RRSAP has identified 21 actions based on best practice which have been chosen to be realistic, sustainable and actionable by 2027 in support of reaching our overarching Traffic Safety Strategic Plan vision of eliminating death and serious injury on the Strathcona County's road network.

## Appendix 1: Fatal and major injury collisions ATEC rural highways 2018-2022



# Appendix Two: Map of all injury collisions on Strathcona County-owned rural roads 2018-2022 (excluding animal strikes)



## Appendix Three: Recommendations of the ITMP and SRRMP

### *ITMP*

Safety 1. Provide a safe and inclusive transportation experience for all users of the transportation system, regardless of their transportation choice.

Safety 2. Ensure safety is foundational and apply the Safe Systems approach in transportation network planning and design.

Safety 3. Through planned rehabilitation projects, identify and incorporate safety improvements, specifically as it relates to more vulnerable users such as pedestrians and cyclists.

Accessibility 4. Continue to invest in active transportation infrastructure that is accessible to all transportation network users and integrated with other transportation modes.

Connectivity 2. Work with regional partners to coordinate multi-modal transportation options to provide access to places of employment, education, and services in urban and rural areas.

Connectivity 5. Identify opportunities to enhance transportation connections to, from and within the Rural Service Area to access employment areas, services, and destinations.

Economy 5. Utilize cost benefit analysis to evaluate the life cycle cost of proposed improvements and maintenance and invest in timely routine maintenance practices to extend the service life of existing roads, sidewalks, and trails.

### *SRRMP*

#### **Preservation of investment**

- Continue to invest in timely routine interim maintenance practices to increase the design life of existing roads.
- Develop a formal process for trialing new products or construction methods.
- Site specific engineering and geotechnical work should be performed to identify the proper rehabilitation or maintenance treatment.
- A cost benefit analysis should be used to evaluate the life cycle cost of proposed improvements and maintenance.
- Technology should be used to capture a richer data set when completing traffic counts.
- Industry partners should be engaged about directing their employees to use specific routes for employees and trucks.
- County staff should develop a regular communication and information sharing program with neighboring municipalities.

## **Safety measures**

- A brushing program should be implemented where trees are cleared at intersections to increase sightlines.
- Continue to collect the most comprehensive data available for collisions.
- Implement guidelines for additional safety measures at rural stop-controlled intersections.
- Consider rural roundabouts as potential intersection treatments.
- Keep the right-of-way mowed and clear of trees in animal corridors to reduce animal collisions.
- Intersecting roadways that have a gravel or dust-abated gravel surface should have asphalt. paved a minimum of 30m from edge of roadway to allow for winter maintenance.

## **Rural road functional classification and design standards**

- Update road classification nomenclature.
- Update road classifications to divide the Class II roads into a Rural Major Collector and Rural Minor Collector.
- Develop a functional classification plan based on the long-term network traffic model.
- Develop a formal Rural Industrial Road functional class.

## **Develop rehabilitation design guidelines**

- Develop rehabilitation design guidelines is to provide lower cost and lower impact design options to sustainably extend the service life of the existing infrastructure.

## **Funding requirements**

- To address the backlog in the existing infrastructure deficit the capital budget will need to be significantly increased.