

City of St. John's Collision Report (2018 - 2022)



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List of Abbreviations

PDO	Property Damage Only Collision
INJ	Injury Collision
FAT	Fatal Collision
AADT	Annual Average Daily Traffic
NLSA	Newfoundland and Labrador Statistics Agency

1. Introduction

The City of St. John's Collision Report is a summary of reported collision statistics and trends associated with traffic collisions that were reported in the City of St. John's and occurred on City Streets. The raw collision data is obtained from the Newfoundland and Labrador Statistics Agency (NLSA), Department of Finance, and includes all reported collisions occurring within City limits – including those occurring on provincial jurisdiction roadways and those occurring within parking lots. The data is filtered and summarized to identify those collisions occurring on City jurisdiction streets. While every effort has been made to ensure the accuracy of the required data filtering and aggregation, the City of St. John's gives no warranties or representations that the information is correct, accurate, or free from error. From the collision database, a total of 6566 reported collisions occurred on City Streets. This report will focus on those collisions. The report will provide guidelines to identify high collision locations and potential areas of concern to conduct detail safety analysis and identify possible mitigating measures at later stage.

This report will provide summary statistics of reported collisions and will highlight locations that seem to have a higher collision risk. At this stage, the ranking of sites coming from the high-level collision analysis does not identify root cause of safety issues for individual locations. When examining this data, caution must be used to ensure that specific conclusions or calls to action are not made before a more thorough examination of the individual location(s) is completed. The factors responsible for causing a collision are not always the most obvious nor are they always readily apparent due to collisions involving complex interactions between human behaviour, vehicle characteristics, and environmental conditions. Appropriate supporting information from a detailed investigation into individual locations and collisions is required prior to diagnosing any safety issues and identifying potential mitigating measures. Considerations should be made for locations that have undergone recent or ongoing changes, as the effects of those changes may not be fully captured. It is noted that during 2020 there were various lockdowns and work from home directives in place because of the Covid-19 pandemic, which reduced daily commutes and traffic volumes. As a result, there was a drop in the number of collisions observed.

Finally, this report has a list of recommendations for future action.

2. Data Sources

2.1 Collision Database

The collision database for this report was obtained from the Newfoundland and Labrador Statistics Agency (NLSA), Department of Finance, the provincial agency that maintains the collision database reported by the police department. Therefore, only collisions that were reported to the police are included in the analysis presented in this report. Reference to collisions within this report shall be taken to mean reported collisions unless explicitly stated otherwise. According to the Royal Newfoundland Constabulary website¹ a police report is required in a vehicle collision where:

- There is a personal injury or fatality,
- There is property damage exceeding \$2,000, or
- The accident is a hit and run.

This report will analyze the most recent five full years of reported collisions, from January 1, 2018 to December 31, 2022. Note that there was a slight difference in the total number of collision records for each year compared to the numbers used in the previous Collision Report². It is assumed that the latest version of the collision database would have more complete and verified records.

The collision database defines a collision as an incident involving one or more motor vehicles resulting in either personal injury, fatality or aggregate property damage of more than \$1,000 (the previous threshold for reporting a non-injury/fatal collision). There are three categories of collision severity: fatal, injury, and property damage only (PDO).

1. Fatal Collision - a collision that results in at least one death, either at the scene or because of injuries sustained in the collision.
2. Injury Collision - a collision that results in at least one readily apparent injury, or vehicle damages that would support the claim of an injury from an involved individual.
3. PDO Collision – a collision in which there is property damage to the vehicle(s) involved and/or other property, and no apparent personal injury.

The collision database has a record of each reported collision related to date, time of occurrence, location (location ID, street names), collision type (severity, impact type, etc.), environment conditions (weather, light, etc.), and some details on the driver/pedestrian/cyclist actions.

¹ [RNC Report an Accident](#)

² [St. John's Collision Report \(2012 – 2019\)](#)

2.2 Collision Data Adjustment

As with any large database, there is always the possibility of keying errors in any given entry field. When reviewing the data at a high-level such as for this report, any such errors, if present, may not necessarily be evident. As the database is used, the City, Province, and RNC continue to work towards reducing the possibility for error.

To present a high-level overview of collisions occurring on City streets only, it was important to separate out the collisions related to provincial jurisdiction roadways and those occurring inside parking lots (typically private property). The remaining collision records were then identified as collisions occurring on City streets.

Data grouping was also required for select locations based on the way information is provided to the collision database.

3. Collisions within City's Limits

Figure 1 shows the complete road network within the City's limits, including City streets and provincial jurisdiction roadways. The City contains approximately 1780 lane-km of roads. Collisions within the City limits includes those that occurred on City streets, provincial jurisdiction roadways³ and parking lots.

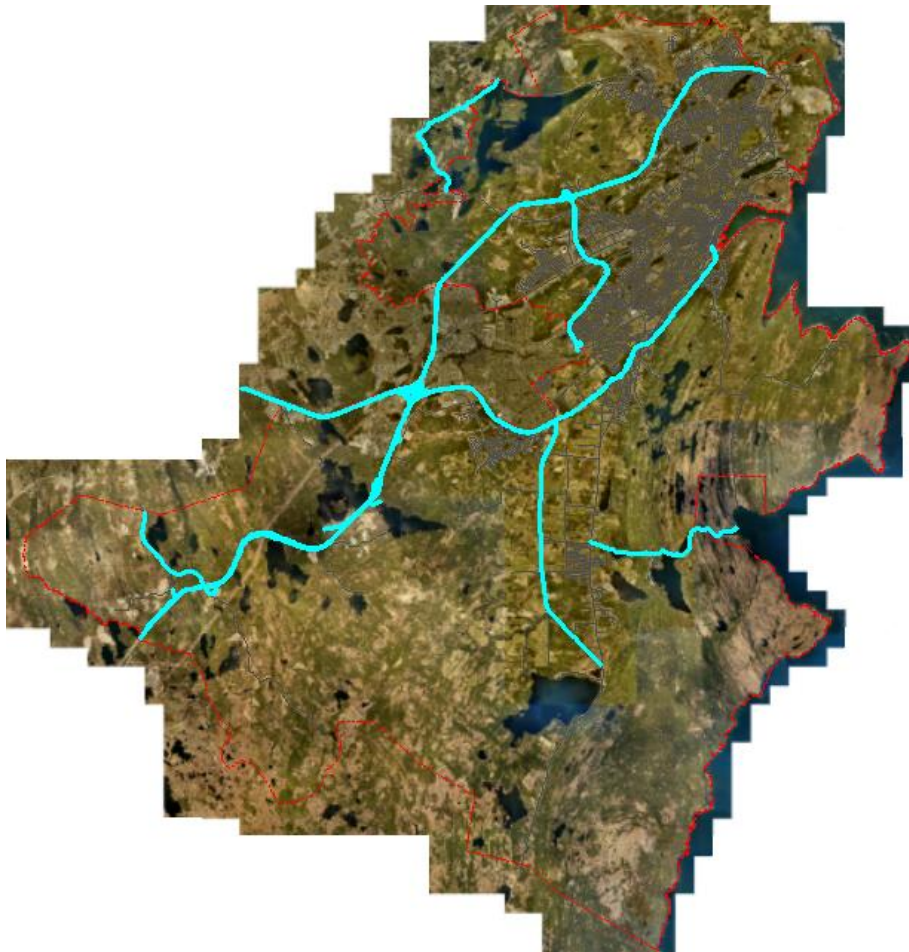


Figure 1: City of St. John's Road Network (blue is provincial jurisdiction roads)

Figure 2 shows historical trends of motor vehicle collisions that occurred on City streets for the past 5 years. In this five-year analysis period, a total of 6566 reported collisions occurred, with an average of 1313 collisions per year. The significant drop in collision counts in 2020 would be attributed to the reduced commute affected by the Covid-19 pandemic, which included various lockdowns and work from home directions. To benchmark overall road safety of the City, it was compared with the collision trend from

³ Trans Canada Highway, Paddy's Pond Service Road, Cochrane Pond Service Road, Petty Harbour/Maddox Cove Road, Pitts Memorial/CBS Bypass, Pitts Memorial Service Road, Robert E Howlett Memorial Drive, Marine Drive – Outer Cove Road, Team Gushue Highway, Old Broad Cove Road, Bennett's Road, Conception Bay Highway, Foxtrap Access Road, and Foxtrap Weigh Scales Access Road

Northeast Avalon Region⁴ as illustrated in **Figure 3**. The region has a continuous decreasing collision trend over the past five-year period.

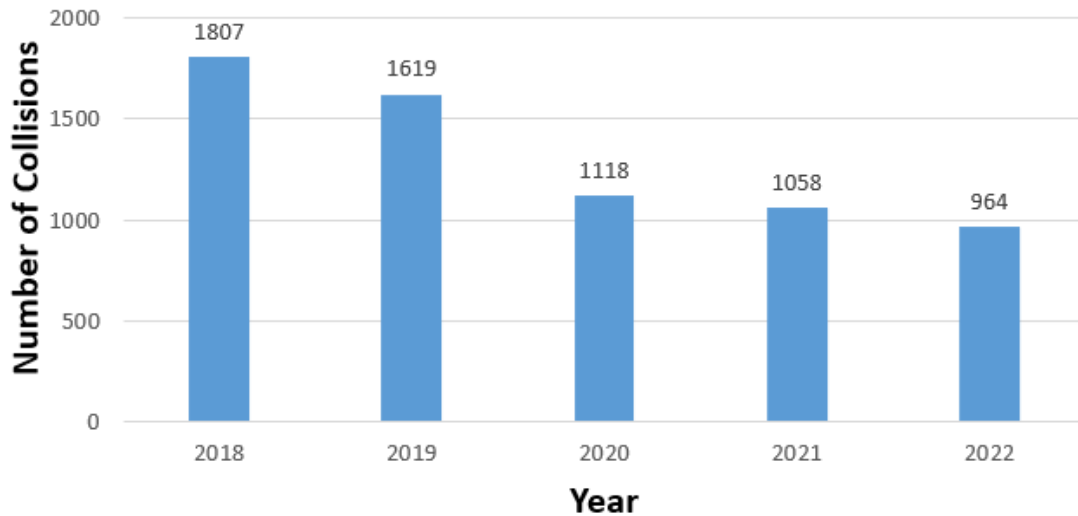


Figure 2: Reported Collisions on City Streets

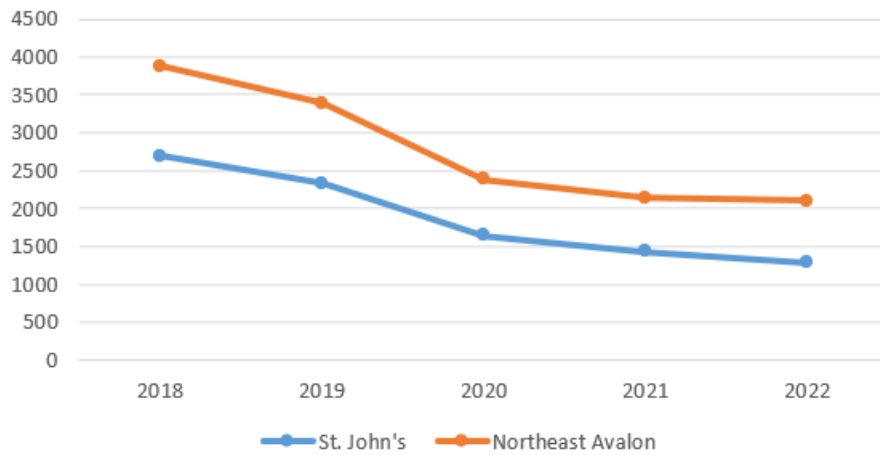


Figure 3: Collision Trend Compared to Northeast Avalon Region

⁴ [2022 Annual Juristat Report](#); Northeast Avalon Region includes St. John's, Mt Pearl, Conception Bay South, Paradise, Portugal Cove - St. Philips, Torbay, Pouch Cove, Logy Bay - Middle Cove- Outer Cove, Flatrock, Petty Harbour-Maddox Cove and Bauline.

4. Collisions Related to City Streets

For the remainder of this report, analysis and discussions are based only on reported collisions that occurred on City streets. Between 2018 and 2022, there were a total of 6566 collisions on City streets with an average of 1313 collisions per year.

4.1 Collision Summary by Severity Type

The severity of a collision is an important indicator that can be used to target safety interventions. In the collision database, collisions are identified as fatal (FAT), injury (INJ) and property damage only (PDO). Fatal and injury collisions are serious incidents where individuals and families are directly hurt by the collisions. Thus, these collisions carry significantly higher direct and societal costs compared to PDO collisions. It should be noted that the collision database does not distinguish the severity of injury. Any non-fatal injury related to a collision, whether minor or major in nature, will result in classification as an injury collision.

Figure 4 shows collision counts by severity type across the analysis period, with a summary provided in **Table 1**. Overall, there is a decreasing trend for injury and PDO collisions for the city streets. Fatal collisions have remained between three (3) to five (5) per year, despite the pandemic effect.

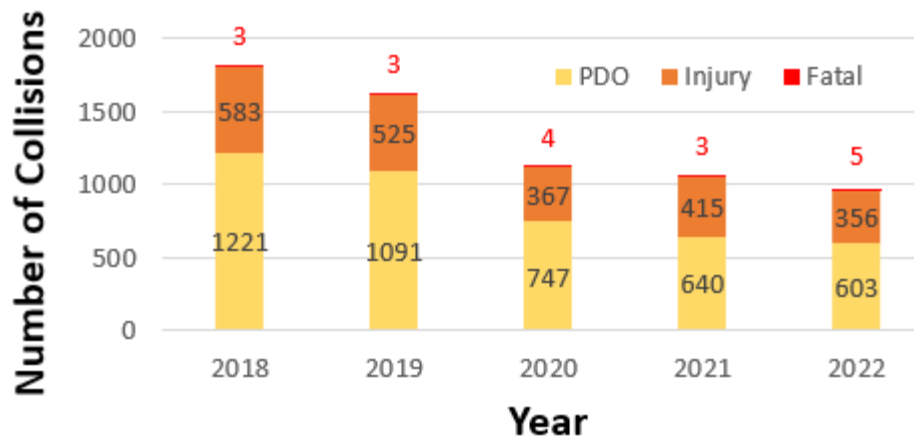


Figure 4: Collision Trend by Severity Type

Table 1: Summary of Reported Collisions on City Streets

Factors	Year				
	2018	2019	2020	2021	2022
Total Collisions	1807	1619	1118	1058	964
Fatal Collisions	3	3	4	3	5
Injury Collisions	583	525	367	415	356
Property Damage Only collisions	1221	1091	747	640	603
Population, City of St. John's (2021 census)	110,525				
Average annual collisions	1313.2				
Collisions per 100,000 population per year	1188.1				
Average annual fatal collisions	3.6				
Average Fatal collisions per 100,000 population per year	3.3				
Average annual injury collisions	449.2				
Average injury collisions per 100,000 population per year	406.4				

4.2 Collision Summary by Person/Vehicle Involvement

Table 2 shows the number of persons involved in fatal and injury collisions, and the number of vehicles involved in collisions. There was a total of 19 fatalities in the 18 fatal collisions, of which eight (8, 42%) were pedestrians or cyclists. Of the remaining eleven (11, 58%) fatalities, the victims were either drivers or passengers of a motor vehicle (including motorcycle). In terms of collision locations, 26% of these fatal cases occurred at intersections and the remaining 74% at mid-block sections. There is a decreasing trend in terms of number of vehicles involved in collisions over the past 5 years.

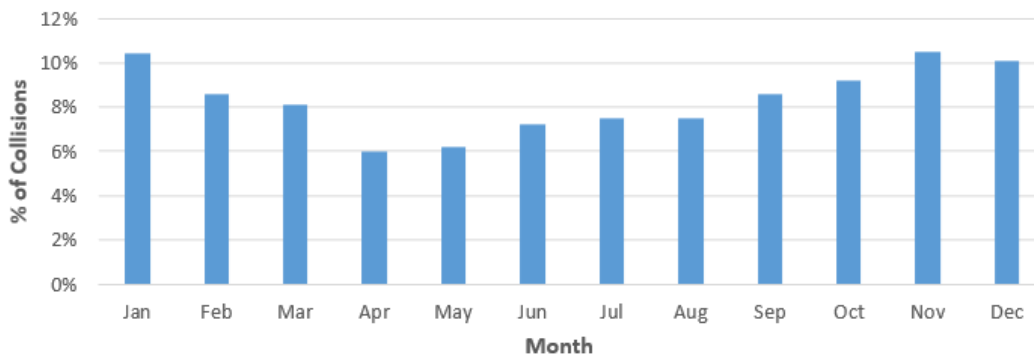
Table 2: Number of Persons and Vehicles Involved in Collisions

Year	Total Collisions	Total fatal persons	Total injured persons	Total vehicles involved
2018	1807	3	795	3515
2019	1619	3	708	3081
2020	1118	5	490	2167
2021	1058	3	554	2038
2022	964	5	527	1832
Total	6566	19	3074	12633
Average per year	1313.2	3.8	614.8	2526.6

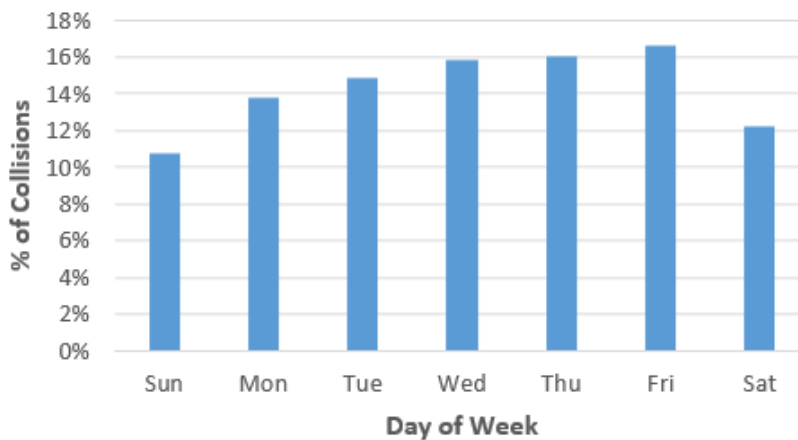
4.3 Collision Summary by Month/Day/Time of Occurrence

Collision patterns are explored by month of the year, day of the week and time of the day. **Figure 5 (a)** shows total collisions by month of the year over the analysis period. Relatively, winter months have a high number of collisions, which would partly be related to the adverse driving condition caused by snowstorms, iced/slippery roads, and shorter hours of daylight.

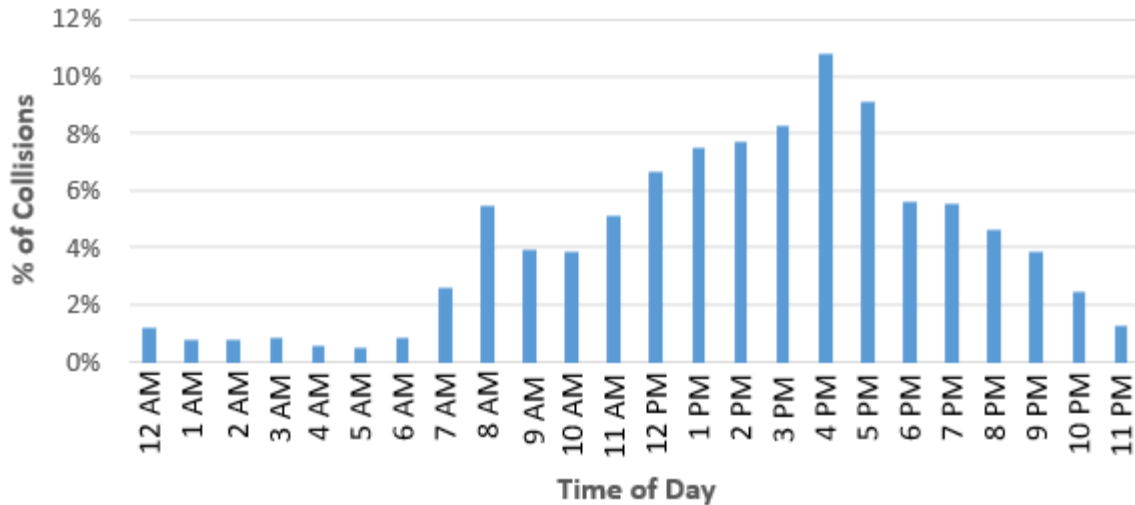
The proportion of collisions occurring on weekdays is relatively more than on weekends. However, collision counts on each weekday are similar, as are collision counts on Saturday and Sunday. **Figure 5 (b)** shows total collisions by day of the week. For the time of the day, afternoon hour 4 PM experiences the highest number of collisions followed by the 5 PM and 3PM hours. In the morning, the 8 AM hour has more collisions. A higher number of collisions occurring during the peak hour time is expected due to higher traffic volumes during these times. **Figure 5 (c)** shows total collisions by hour of the day.



(a)



(b)



(c)

*Note that 6% of collisions are excluded, as their records did not include time of day

Figure 5: Collision Proportion by Month/Day/Time of Occurrence (2018-2022)

4.4 Collision Summary by Pedestrian Involvement

For the five-year period between 2018 and 2022, a total of 354 pedestrian related collisions occurred on City streets. Of these, seven (7) were fatal, as shown in **Figure 6**, and 52 collisions involved a pedestrian that was not struck (e.g. a vehicle stopped for a pedestrian and was then rear ended). This is an average of 71 pedestrian collisions per year. In terms of severity, 86% of pedestrian collisions resulted in injury or fatality.

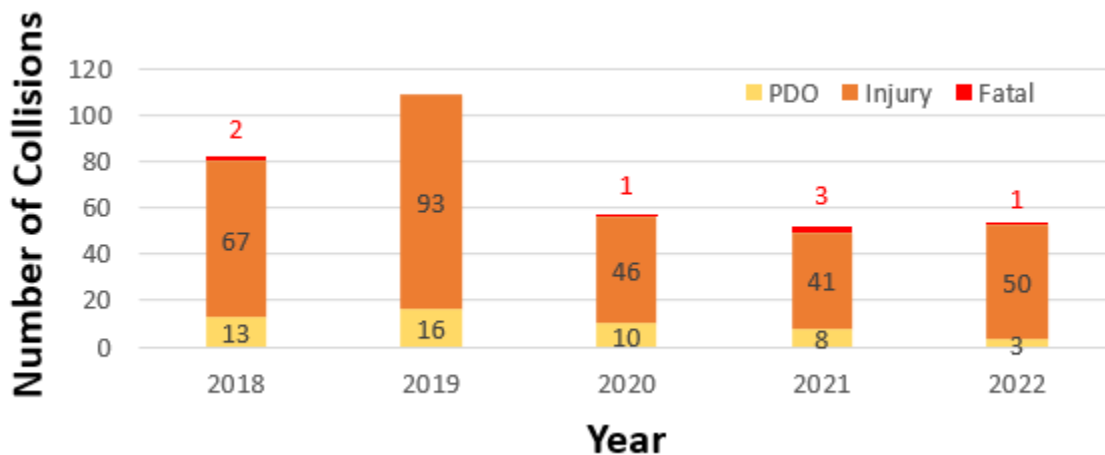


Figure 6: Reported Collisions Involving Pedestrians (2018-2022)

4.5 Collision Summary by Cyclist Involvement

For the five-year period between, a total of 69 cyclist related collisions occurred on City streets with an average of 14 collisions per year, as shown in **Figure 7**. In terms of severity, approximately 81% of cyclist collisions resulted in injury or fatality. At present, there is no field within the collision database dedicated to detailed information for cyclist's action. It should also be noted that not all collisions involving a cyclist are coded as "Hit Pedestrian or Cyclist", as there are cases where the cyclist was not hit (e.g. a cyclist peddled into a vehicle, thus they were not hit by the vehicle). Collisions such as these would be given different configuration codes depending on the details of each such collision.

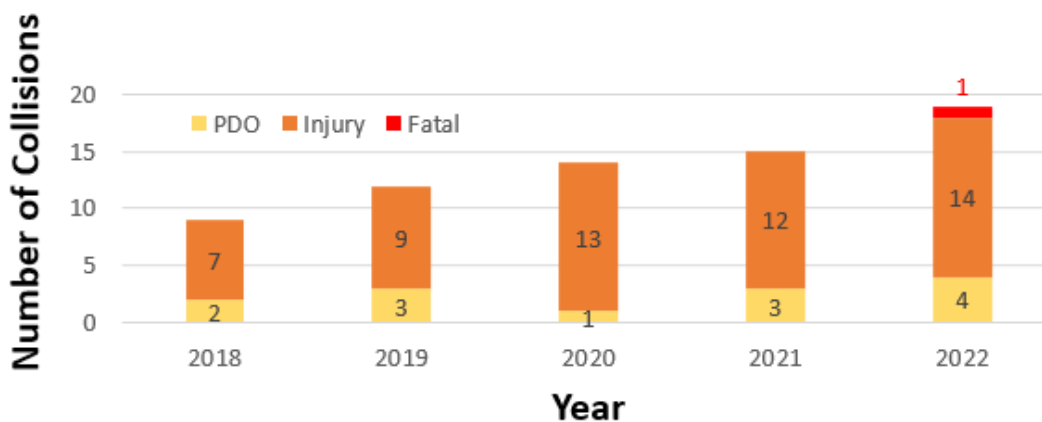


Figure 7: Reported Collisions Involving Cyclists (2018-2022)

4.6 Collision Summary by Location Type

Mid-block collisions are classified as collisions on a road segment between two intersections that is not related to the nearby intersections. There is some room for interpretation with how collisions are reported in these cases. One individual may report a rear-end collision as occurring on a mid-block while another individual may identify a queue of traffic to a nearby intersection as being an underlying factor and therefore classify the collision as occurring at that intersection. This interpretation in reporting means that when detailed collision assessments are completed it is important to look at collisions identified as occurring at the intersection, and collisions occurring on the segments adjacent to the intersection.

An intersection is any point where two or more road segments meet and conflicts between vehicles can occur. An intersection may be a roundabout, signalized, unsignalized (e.g., yield or stop controlled) or uncontrolled (e.g., acceleration/deceleration lanes for on/off ramps at an over/underpass). The collisions at these two broad location types are shown in **Figure 8**.

Of the 6566 collisions occurring on City streets from 2018-2022, 47% occurred at intersections. Total fatal and injury collisions are similar across both location types; however intersections see a higher proportion of fatal and injury collisions than mid-block segments. PDO collisions are higher in mid-block segments. Intersections could have different traffic controls, for example, traffic light, stop sign, yield sign, etc. Within the collision database, there are fields to identify the type of traffic control. As a collision at an intersection involves two (2) or more roads, the control type for the reported collision road 1 was used to evaluate collisions by control type, with collision road 2 checked for stop control and grouped with those identified as stop control in collision road 1. This aided in capturing locations with stop control on either of the roads involved. For all other configurations, the traffic control at collision road 1 was used (e.g. a collision occurring where road 1 has no control and road 2 is yield controlled would appear as no control). This data shows that collisions at signalized intersections is the highest among the intersection types followed by stop control (**Figure 9**).

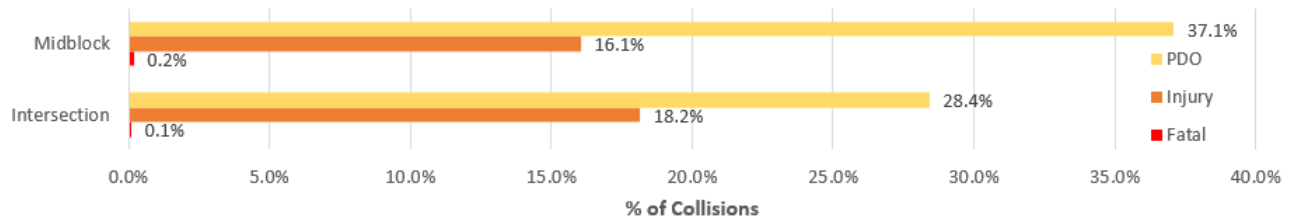


Figure 8: Collision Proportion by Location Types (2018- 2022)

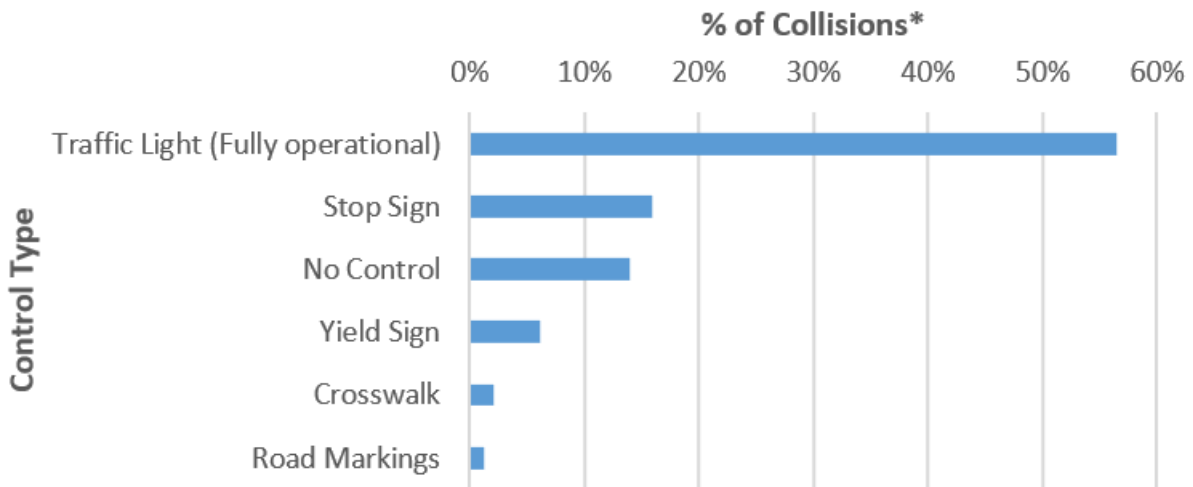
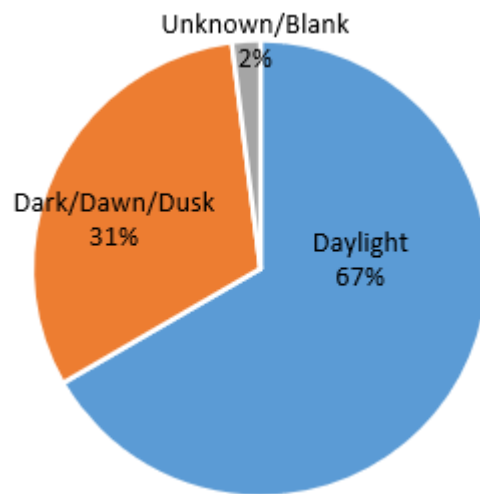


Figure 9: Collision Proportion at Intersections by Control Type (2018-2022)

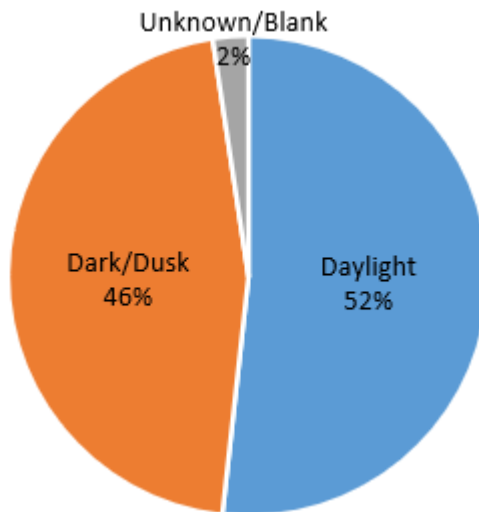
*Excludes those collisions with traffic control coded as “NN – N/A or Pedestrian” as well as those with <0.5% of collisions occurring at the given control type

4.7 Collision Summary by Environment Condition

Within the collision database, there is a field to choose light condition at time of the collision. **Figure 10 (a)** shows the proportion of collisions by recorded light condition for all users (vehicles, pedestrians, and cyclists). **Figure 10 (b) & (c)** shows the proportion of collisions by recorded light condition for pedestrians and cyclists. Approximately two-thirds of all collisions occurred during daylight and the remaining one-third during darkness (including collisions occurring during dawn and dusk). For pedestrians, 52% of collisions occur in the daylight, and 46% in the dark/dusk. Cyclist collisions over the five-year period studied have occurred primarily during daylight, with 74% of reported collisions occurring in daylight conditions.



(a) All Users



(b) Pedestrians

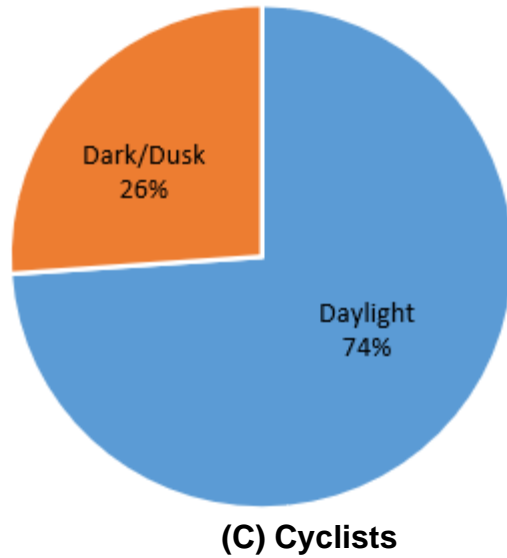


Figure 10: Collision Proportion by Recorded Light Condition (2018-2022)

Figure 11 shows proportion of collisions by recorded weather condition. 61% of the collisions occurred during clear weather conditions, 18% during overcast, 10% during rain, and 7% during snow conditions. The “Others” weather condition in the chart below (2% of collisions) includes the recorded conditions dusty, windy, other, unknown, and field left blank.

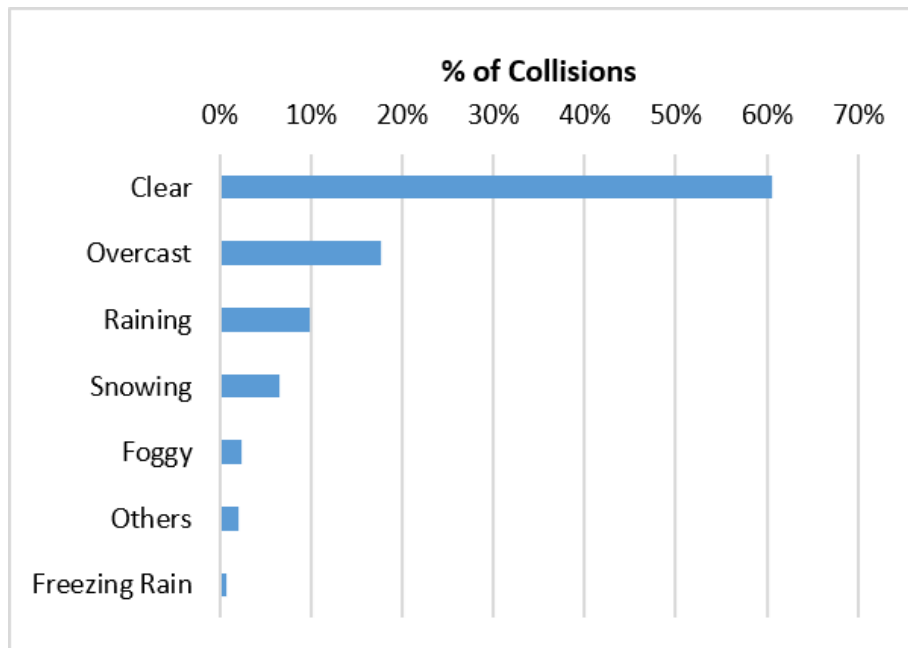


Figure 11: Collision Proportion by Recorded Weather Condition (2018-2022)

5. Network Screening

Network screening involves ranking sites across the road network based on a safety performance indicator. It is the first step undertaken in a systematic road safety management process. The sites that appear at the higher rank are considered first for potential safety improvement opportunities, with exceptions made for sites that have had recent or ongoing changes that may impact rating, and those sites that have been part of previous detailed study. The safety performance indicators used for this report are collision rate, which is calculated as total collisions divided by traffic exposure for the study period, and collision frequency, which is the number of collisions reported for the study period.

As noted in sections above, mid-block segments see the highest number of collisions, while intersections see the highest proportion of fatal and injury collisions. Additionally, the collision impact type with the highest severity (fatality/injury) is Hit Pedestrian or Cyclist. Therefore, it is important that sites are ranked among their peer groups, which can be identified based on their site characteristics. Based on information available, sites are ranked for the following basic groups:

- Intersections
- Mid-block sections
- Locations involving pedestrian/cyclist collisions

Another important consideration is that, as discussed in Section 2.2, Collisions Data Adjustment, regrouping of several locations was required based on the way data is collected within the collision database. Although every attempt has been made to ensure that complete intersections are captured and any legacy mid-block codes are grouped with current codes, this was a manual process applied to the raw data.

5.1 Intersection Collision Ranking

Collision rate for intersection ranking is the number of collisions expected for every million vehicles that enter an intersection and it is calculated using Eq. 1 and Eq. 2

$$CR^{Int} = \frac{C}{MEV} \quad (\text{Eq. 1})$$

$$MEV = \frac{AADT \times 365 \times y}{1,000,000} \quad (\text{Eq. 2})$$

Where:

- CR^{Int} is collision rate for an intersection

- C is total collisions for study period (5-years for this report)
- MEV is million entering vehicles
- AADT is annual average daily traffic volume entering the intersection
- y is number of years (e.g., 5)

AADT for an intersection represents the total traffic entering the intersection and was estimated using AM and PM peak hour volumes. While traffic data was counted during different years, and in the past has been normalized to represent counts for a single year, this step was not completed for this report. As this report spans 2018-2022, it captures most, if not all, of the Covid-19 pandemic. During that period, there were several restrictions in place that would have influenced traffic patterns. While some legacy counts have been used, most traffic counts for this report are from 2017 and later, with no counts completed during 2020 (the year with the greatest covid lockdowns). These counts capture pre- and post-pandemic traffic volumes, and as the true effects of permanent changes to traffic patterns are not completely understood yet it was determined that applying a growth factor to normalize traffic volumes could potentially skew the data in undetermined ways. It appears that there have also been recent changes in traffic patterns throughout the City as new routes have opened, and some major construction projects have been undertaken on main arterial roads. Given these considerations, a decision was made that estimated AADT (as opposed to normalized AADT) would be the best representation of trends at this time.

Traffic volumes for intersections experiencing an average of two (2) or more collisions per year, or ten (10) collisions within the 5-year study period, were used to calculate collision rates. Note that there were select intersections for which traffic data was not available at the time of preparing this report (7 locations). The intersections with traffic data available (57 locations) were then ranked based on their collision rate to find the top 25 intersections by collision rate. Accounting for ties, there are 33 intersections that make up the top 25 intersections by collision rate.

Table 3 shows the top 25 intersections with their locations indicated in **Figure 12**. It is noted that all but one of the intersections identified in **Table 3** are signalized intersections. The one unsignalized intersection making the list is Empire Avenue @ Newtown Road. To identify any potential safety issues or root causes of collisions, each intersection would need to be studied in detail with a comprehensive collision analysis, site visits, and traffic analysis.

Table 3: Ranking for Intersections (top 25 locations) by Collision Rate

Rank	Intersection	FAT	INJ	PDO	Total collisions	% Resulting in Inj/Fat	AADT	Collision rate
1	Goldstone Street @ Thorburn Road / Seaborn Street	0	15	28	43	35%	18507	1.37
2	Higgins Line / Portugal Cove Road @ Newfoundland Drive	0	31	45	76	41%	30372	1.36
3	Rawlins Cross	0	23	33	56	41%	23806	1.31
4	Torbay Road @ Elizabeth Ave	0	22	19	41	54%	19758	1.12
5	Prince Philip Drive @ Thorburn Road	0	18	42	60	30%	29595	1.09
6*	Allandale Road @ Prince Philip Drive	0	28	54	82	34%	48531	0.97
6*	Macdonald Drive @ Portugal Cove Road	0	26	43	69	38%	41258	0.97
7	Kelsey Drive @ Kiwanis Street	0	12	20	32	38%	18309	0.95
8*	Portugal Cove Road @ Majors Path / Airport Heights Drive	0	25	27	52	48%	31300	0.90
8*	Empire Avenue @ Newtown Road	0	6	7	13	46%	7770	0.90
8*	Torbay Road @ Macdonald Drive	0	16	31	47	34%	27993	0.90
9*	Blackmarsh Road @ Columbus Drive	0	21	23	44	48%	27246	0.89
9*	Cowan Avenue @ Topsail Road	0	16	21	37	43%	23023	0.89
10	Empire Avenue @ Stamp's Lane	0	9	13	22	41%	17039	0.84
11	Larkhall Street @ Thorburn Road	0	14	15	29	48%	19763	0.79
12	Aberdeen Avenue @ Stavanger Drive / Clovelly Golf Course Road	0	12	13	25	48%	18284	0.77
13	Torbay Road @ Stavanger Drive	0	18	18	36	50%	26205	0.75
14	Columbus Drive @ Old Pennywell Road	0	16	21	37	43%	27985	0.71
15	Newfoundland Drive @ Torbay Road	0	13	23	36	36%	27882	0.70

16	Torbay Road @ White Rose Drive	0	11	24	35	31%	27639	0.69
17	Campbell Avenue @ Cashin Avenue / Cashin Avenue Extension	1	7	12	20	40%	17392	0.66
18	Columbus Drive @ Topsail Road	0	19	20	39	49%	34983	0.65
19	Canada Drive @ Hamlyn Road	0	8	5	13	62%	10925	0.64
20*	Columbus Drive @ Hogan Street / Captain Whelan Drive	0	4	16	20	20%	17952	0.60
20*	Empire Avenue @ Freshwater Road	0	4	15	19	21%	17184	0.60
20*	Allandale Road @ Mount Scio Road	0	11	16	27	41%	25639	0.60
21	King's Bridge Road @ New Cove Road / The Boulevard	0	6	14	20	30%	18193	0.59
22*	Southlands Boulevard @ Ruby Line	0	6	12	18	33%	17459	0.57
22*	Elizabeth Avenue @ New Cove Road	0	6	16	22	27%	21723	0.57
23*	Kenmount Road @ Polina Road (Avalon Mall Entrance)	0	7	17	24	29%	24121	0.55
23*	Lemarchant Road @ Prince Of Wales Street / Barter's Hill	0	10	7	17	59%	17273	0.55
24	Crosbie Road @ Freshwater Road	0	9	14	23	39%	23946	0.54
25	Prince Philip Drive @ Clinch Cres/ Westerland Road	0	11	23	34	32%	37125	0.52

FAT: Fatal collision, INJ: Injury collision, PDO: Property damage only collision

*Denotes locations receiving the same numerical ranking based on ties in calculated collision rate



Figure 12: Locations of Top 25 Intersections with High Collision Risk

As all but one of the top 25 intersections by collision rate include at least one (1) arterial road, the top 5 collector and top 5 local road intersections were also ranked. Traffic volume data was not available to calculate collision rate for all locations, therefore these rankings were completed by number of collisions (also known as collision frequency). Note that based on lower collision frequencies for collector and local roads, the average

two (2) collisions or more per year, ten (10) collisions within the study period, had to be discarded to produce these lists.

Table 4: Ranking for Collector Road Intersections (top 5 locations) by Collision Frequency

Rank	Intersection	FAT	INJ	PDO	Total collisions	% Resulting in Inj/Fat
1	Canada Drive @ Hamlyn Road	0	8	5	13	62%
2	Mayor Avenue @ Merrymeeting Road	0	4	7	11	36%
3	Mundy Pond Road / Campbell Avenue @ Pearce Avenue	0	4	4	8	50%
4	Newtown Road @ Parade Street / Merrymeeting Road	0	1	6	7	14%
5*	Pennywell Road @ Ropewalk Lane	0	5	1	6	83%
5*	Stamp's Lane @ Terra Nova Road	0	4	2	6	67%

FAT: Fatal collision, INJ: Injury collision, PDO: Property damage only collision

*Denotes locations receiving the same numerical ranking based on ties in number of collisions (collision frequency)



Figure 13: Locations of Top 5 Collector Road Intersections with High Collision Risk

Table 5: Ranking for Local Road Intersections (top 5 locations) by Collision Frequency

Rank	Intersection	FAT	INJ	PDO	Total collisions	% Resulting in Inj/Fat
1	Carter's Hill @ Livingstone Street	0	1	7	8	13%
2*	Clinch Crescent @ Mosdell Road / Janeway Parking Lot Entrance	0	1	3	4	25%
2*	Lions Road @ New Pennywell Road	0	1	3	4	25%
3*	Aldershot Street @ Calver Avenue	0	2	1	3	67%
3*	Aldershot Street @ Goodridge Street	0	1	2	3	33%
3*	Brazil Street @ Monroe Street	0	1	2	3	33%

FAT: Fatal collision, INJ: Injury collision, PDO: Property damage only collision

*Denotes locations receiving the same numerical ranking based on ties in number of collisions (collision frequency)



Figure 14: Locations of Top 5 Local Road Intersections with High Collision Risk

5.2 Mid-block Collision Ranking

Mid-blocks (road segments) are ranked based on collision frequency (the number of collisions that have occurred within the 5-year analysis period). Like intersections, locations with an average of two (2) collisions or more per year, ten (10) collisions or more within the study period, were ranked. The top 20 locations by collision frequency (or those

locations with 10 or more collisions within the past 5-years) are presented in **Table 6**. Accounting for ties, there are 48 locations that make up the top 20 mid-block segments.

Table 6: Ranking for Mid-Blocks (top 20) by Collision Frequency

Rank	Mid-block Segment	FAT	INJ	PDO	Total Collisions	Length (m)
1	Kelsey Drive btwn Kiwanis Street & Messenger Drive	0	19	39	58	1019
2	Kenmount Road btwn Avalon Mall Parking Lot & Peet Street	0	15	27	42	619
3	Torbay Road btwn Trans Canada Highway & Stavanger Drive	0	11	25	36	214
4	Kenmount Road btwn Peet Street & Pippy Place	0	14	19	33	605
5	Topsail Road btwn Burgeo Street & Dunn's Road	0	13	15	28	696
6	Topsail Road btwn Cowan Avenue & Holbrook Avenue	0	9	17	26	190
7	Hamlyn Road btwn Barachois Street & Topsail Road	0	12	13	25	366
8	Kenmount Road btwn Pippy Place & Team Gushue Highway Northeast	0	6	18	24	258
9	Prince Philip Drive btwn Clinch Cres & Clinch Cres / Westerland Road	0	7	15	22	560
10*	Torbay Road btwn Slattery Road & Macdonald Drive	0	4	17	21	378
10*	Southern Shore Hwy btwn Regional Water Road & Access Road/Beyond City Limits	1	5	15	21	9817 (Beyond City Limit)

Rank	Mid-block Segment	FAT	INJ	PDO	Total Collisions	Length (m)
11	Elizabeth Avenue btwn New Cove Road & Torbay Road	0	3	17	20	369
12*	Torbay Road btwn Stavanger Drive & White Rose Drive	0	6	13	19	276
12*	Stavanger Drive btwn Torbay Road & Aberdeen Avenue	0	3	16	19	657
12*	Topsail Road btwn Hamlyn Road & Holbrook Avenue	0	7	12	19	341
12*	Aberdeen Avenue btwn Stavanger Drive & Stavanger Drive	0	7	12	19	436
13*	Prince Philip Drive btwn Clinch Cres / Westerland Road & Livyer's Loop / Morrissey Road	0	7	11	18	461
13*	Prince Philip Drive btwn Confederation Parking Lot & Portugal Cove Road	0	5	13	18	526
14*	Prince Philip Drive btwn Allandale Road & Confederation Parking Lot	0	11	6	17	992
14*	Kenmount Road btwn Kelsey Drive & Team Gushue Highway	0	8	9	17	295
15*	Torbay Road btwn Airport Access & White Rose Drive	0	2	14	16	980
15*	Duckworth Street btwn Bates Hill & McBride's Hill	0	1	15	16	203
16*	Thorburn Road btwn Moss Heather Drive & Wigmore Court	1	6	7	14	236
16*	Freshwater Road btwn Elizabeth Avenue & Freshwater Road / Stamp's Lane	0	8	6	14	218
17*	Torbay Road btwn Newfoundland Drive & Pearson Street	0	9	4	13	434

Rank	Mid-block Segment	FAT	INJ	PDO	Total Collisions	Length (m)
17*	Newfoundland Drive btwn Oderin Place & Torbay Road	0	2	11	13	230
17*	Prince Philip Drive btwn Allandale Road & Morrissey Road	0	4	9	13	487
17*	King's Bridge Road btwn Lake Avenue & Winter Avenue	0	3	10	13	155
17*	Kenmount Road btwn Great Eastern Avenue & Wyatt Boulevard	0	6	7	13	442
17*	Kenmount Road btwn Team Gushue Highway & Team Gushue Highway	0	8	5	13	93
17*	Columbus Drive btwn Old Pennywell Road & Mundy Pond Road	0	5	8	13	916
18*	Torbay Road btwn Trans Canada Highway & Trans Canada Highway	0	6	6	12	185
18*	Topsail Road btwn Hamlyn Road & Columbus Drive	0	4	8	12	345
18*	New Gower Street btwn Adelaide Street & Duckworth Street	0	2	10	12	67
18*	Kenmount Road btwn Trans Canada Highway & Mount Carson Avenue	0	6	6	12	1316
18*	Kenmount Road btwn Ladysmith Drive & Ryan's Lane	0	4	8	12	675
18*	Freshwater Road btwn Crosbie Road & Freshwater Road / Stamp's Lane	0	6	6	12	255
19*	Topsail Road btwn Brookfield Road & Outerbridge Street	0	1	10	11	547

Rank	Mid-block Segment	FAT	INJ	PDO	Total Collisions	Length (m)
19*	Torbay Road btwn Pearson Street & Southern Shore Highway	0	5	6	11	279
19*	Thorburn Road btwn Bennett's Road & Thorburn Road / Trans Canada Highway	0	3	8	11	2306 (Beyond City Limit)
19*	Prince Philip Drive btwn Clinch Cres & Thorburn Road	0	1	10	11	772
19*	Elizabeth Avenue btwn New Cove Road & Portugal Cove Road	0	3	8	11	292
19*	Columbus Drive btwn Blackmarsh Road & Hogan Street / Captain Whelan Drive	0	4	7	11	653
20*	Torbay Road btwn Penney Crescent & Penney Crescent / Torbay Road	0	3	7	10	241
20*	Military Road btwn Barnes Road & Military Road / Garrison Hill	0	6	4	10	236
20*	Kenmount Road btwn Kelsey Drive & Ryan's Lane	0	3	7	10	169
20*	Aberdeen Ave btwn Stavanger Drive & White Rose Drive	0	1	9	10	290
20*	Barter's Hill btwn Casey Street & New Gower Street	0	2	8	10	87

FAT: Fatal collision, INJ: Injury collision, PDO: Property damage only collision

*Denotes locations receiving the same numerical ranking based on ties in number of collisions (collision frequency)

As many of these locations are arterial roads, the top 5 collector and top 5 local road mid-block segments were also ranked. Note that based on lower collision frequencies for collector and local roads, the average two (2) collisions or more per year, ten (10) collisions within the study period, had to be discarded to produce these lists.

Table 7: Ranking for Collector Road Mid-blocks (top 5 locations) by Collision Frequency

Rank	Mid-block Segment	FAT	INJ	PDO	Total collisions	% Resulting in Inj/Fat	Length (m)
1	Hamlyn Road btwn Barachois Street & Topsail Road	0	12	13	25	48%	366
2	Kiwanis Street btwn Kelsey Drive & Nautilus Street	0	3	6	9	33%	261
3*	Ladysmith Drive btwn Great Eastern Avenue & Kiwanis Street	0	1	7	8	13%	278
3*	Mundy Pond Road btwn Mundy Pond Road / Campbell Avenue & St. Teresa's Court	0	4	4	8	50%	265
4	Blackhead Road btwn Maddox Cove Road & Blackhead Crescent	0	0	7	7	0%	2572

FAT: Fatal collision, INJ: Injury collision, PDO: Property damage only collision

*Denotes locations receiving the same numerical ranking based on ties in number of collisions (collision frequency)

Table 8: Ranking for Local Road Mid-blocks (top 5 locations) by Collision Frequency

Rank	Mid-block Segment	FAT	INJ	PDO	Total collisions	% Resulting in Inj/Fat	Length (m)
1	Southside Road btwn Blackhead Road & Fort Amherst Road	0	1	6	7	14%	2746
2*	Leslie Street btwn Thompson Place & Warbury Street	0	1	5	6	17%	174
2*	Craigmillar Avenue btwn Ryan Street & Topsail Road	0	0	6	6	0%	602
3*	World Parkway btwn Airport Terminal Access Road & Navigator Avenue	0	2	3	5	40%	240
3*	New Pennywell Road btwn Barkham Street & Eagle Court	0	0	5	5	0%	271
3*	Quidi Vidi Village Road btwn Barrows Road & Regiment Road	0	1	4	5	20%	270
3*	Clinch Crescent btwn Artic Avenue & Mosdell Road / Janeway Parking Lot Entrance	0	4	1	5	80%	590
3*	Edgecombe Drive btwn Alice Drive & Fergus Place	0	1	4	5	20%	278

FAT: Fatal collision, INJ: Injury collision, PDO: Property damage only collision

*Denotes locations receiving the same numerical ranking based on ties in number of collisions (collision frequency)

5.3 Pedestrian/Cyclist Collision Ranking

Table 9 and **Figure 15** show the top 15 locations with high number of collisions involving pedestrians and cyclists – those with 3 or more collisions within the five-year study period. The sites were ranked based on total collisions. Traffic volume data was not sufficient to calculate their collision rates. Of the 15 sites, nine (9) sites are intersections (60%) and remaining six (6) sites are mid-blocks (40%).

Table 9: Ranking of Sites for Pedestrian/Cyclist Collisions (Locations with three (3) or more collisions*)

Rank	Location	FAT	INJ	PDO	Total collisions
1	Highland Drive @ Penney Crescent / Torbay Road	-	5	-	5
2*	Freshwater Road btwn Elizabeth Avenue & Freshwater Road / Stamp's Lane	-	4	-	4
2*	Hamlyn Road btwn Barachois Street & Topsail Road	-	3	1	4
2*	Larkhall Street @ Thorburn Road	-	2	2	4
2*	Water Street @ Waldegrave Street/ Harbour Drive	-	3	1	4
3*	Allandale Road / Bonaventure Avenue @ Elizabeth Avenue	-	3	-	3
3*	Bonaventure Avenue btwn Barnes Road & Howley Avenue	-	3	-	3
3*	Campbell Avenue @ Cashin Avenue / Cashin Avenue Extension	-	3	-	3
3*	Cashin Avenue @ Pennywell Road	-	2	1	3
3*	Clinch Crescent btwn Artic Avenue & Mosdell Road / Janeway Parking Lot Entrance	-	3	-	3
3*	Cowan Avenue @ Topsail Road	-	2	1	3
3*	Elizabeth Avenue @ Freshwater Road	-	2	1	3
3*	Elizabeth Avenue btwn Gambier Street & Paton Street	-	3	-	3
3*	Empire Avenue @ King's Bridge Road	-	3	-	3
3*	Harvey Road btwn Parade Street & Fort Townshend	-	3	-	3
3*	Military Road btwn Carew Street & College Square	-	2	1	3
3*	Mundy Pond Road / Campbell Avenue @ Pearce Avenue	-	3	-	3

Rank	Location	FAT	INJ	PDO	Total collisions
3*	Pennywell Road @ Ropewalk Lane	-	3	-	3
3*	Prince Of Wales Street btwn Fitzpatrick Avenue & Ricketts Road	-	3	-	3

FAT: Fatal collision, INJ: Injury collision, PDO: Property damage only collision

*Denotes locations receiving the same numerical ranking based on ties in number of collisions (collision frequency)



Figure 15: Top Locations for Pedestrian/Cyclist Collisions

6. On-going Improvements

Based on findings of the previous City of St. John's Collision Report⁵, it is noted that detailed design for safety improvement(s) is currently on-going for the following locations as part of City of St. John's RFP 2023185:

- Goldstone Street @ Thorburn Road/Seaborn Street
- Hamlyn Road between Topsail Road & Barachois Street
- Kelsey Drive between Kiwanis Street & Messenger Drive

Additionally, the intersection of Portugal Cove Road with Major's Path/Airport Heights Drive is also currently undergoing detailed design to convert it to a roundabout under City of St. John's RFP 2023183, based on its alignment with other projects and its ranking in the previous collision report. This change will address identified safety concerns at the intersection and provide connections for active transportation routes. The intersection of Canada Drive and Columbus Drive has been reconstructed this year as part of the Canada Drive shared-use path construction.

7. Summary and Recommendations

7.1 Summary

This report presents an overview of road safety conditions for the City of St. John's road network based on reported collisions occurring over the past five-year period (2018-2022). The collision database for this report was obtained from the Newfoundland and Labrador Statistics Agency (NLSA), Department of Finance, the provincial agency that maintains the collision database reported by the police department. Preparation of this report required data filtering and aggregation. The City of St. John's gives no warranties or representations that the information is correct, accurate, or free from error. On average, 1313 collisions occurred annually on the City's road network. The most common types of collisions for intersections are rear-end and left turning collisions. For mid-block, the most common collision type is the rear-end collisions, followed by hit parked car. Network screening was conducted to identify the top 25 locations with high collision risk for intersections and the top 20 locations with high collision risk for mid-blocks. For intersections and mid-blocks, those sites with an average of two (2) or more collisions per year, ten (10) or more collisions within the study period, were analyzed. Similarly, the top 15 locations with high pedestrian/cyclist collisions are also identified. As the frequency of collisions involving pedestrians or cyclists is much lower, the frequency threshold applied for analysis was three (3) or more collisions within the study period.

⁵ [St. John's Collision Report \(2012 – 2019\)](#)

7.2 Recommendations

The following are the recommendations for future works and reporting:

- It is recommended to change the collision report update frequency to every three (3) years. This will provide better alignment with the complete timeline of preparing a collision report, selecting sites for detailed study as discussed above, and identifying those sites to bring forward to detailed design and construction. This change considers the processes and timelines involved in seeking funding for the various steps and completing the associated procurement processes.
- Staff should complete a detailed review of locations identified in this summary report and select locations to recommend for a comprehensive safety study, which would then guide recommendations for detailed design and construction. Staff review for site recommendations should include high level investigation into types of collisions occurring and possible mitigating measures, whether there have been any recent or ongoing work in the area that may not be reflected in the collision database for this period, whether the site has been previously studied in detail, and any constraints or limitations to change that may be present at the site which may restrict what, if any, improvements could be made (such as right-of-way constraints, what potential mitigating measure(s) exist to address the predominate crash types, etc.). Sites that have already been considered for safety improvement are to be excluded from the list. This includes sites studied based on the previous collision report, and those sites that have had pilot projects or detailed designs completed in the past.

The comprehensive safety study will include a full study of site-specific collision data, investigation of on-site situations, identification of potential cause(s) of safety issues at those locations, and selection of the most appropriate countermeasures based on their cost-benefit impacts.

From this, staff can then select which sites to put forward in a recommendation for detailed design and construction.