



EXISTING SAFETY CONDITIONS MEMORANDUM (DRAFT)

DATE: July 31, 2025

TO: Project Management Team (PMT)

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SUBJECT: Existing Safety Conditions

Project # P25262-000

INTRODUCTION

This memorandum provides an overview of crash patterns, trends, and contributing factors in Clatsop County from 2019 to 2023. The data includes crashes on public and private roadways, state highways, streets within incorporated cities, and county roads. This crash data was used to develop the County's High Injury Network (HIN), which is comprised of roadway segments and intersections with the highest intensity of crashes within the entire county.

Based on this analysis, recommended Emphasis Areas have been developed for the consideration of the TSAP Task Force. These recommendations are intended to guide the County in prioritizing resources to address the most serious risks associated with fatal and serious injury crashes.

Crash patterns and contributing factors were also analyzed for nine sub-regions within the county. This information is intended to provide applicable summaries for each area that can be leveraged to support other future planning and project programming needs.

Additional information about the crash data and analysis is found in the following sections:

- Countywide Crash Data Analysis (including a summary of county-wide crash data, crash trends, and crash attributes)
- Recommended Countywide Emphasis Areas
- Countywide High Injury Network (HIN)
- Local Crash Data Analysis for nine sub-regions
- Equity Assessment of Countywide Crash Data

Due to the technical nature of this document, a **glossary of terms** is included in the appendix. In the next steps of the TSAP, crash history, Emphasis Areas, equity impacts, and input from the Task Force and community members will be compiled to select up to 10 High-Priority Safety Corridors for which solutions will be developed.

EXECUTIVE SUMMARY

The key information and findings in the following sections include:

- Comprehensive countywide crash data was analyzed for the most recent five-year period (2019 through 2023).
- Between 2019 and 2023, there were 3,217 crashes in Clatsop County over the five-year period. Of these crashes, 54 resulted in at least one fatality, and 181 resulted in a serious injury to a participant. This equates to an annual average of about 644 crashes, with 11 fatal and 37 serious injury crashes, per year.
- Over the 2019-2023 period, between 5 percent and 10 percent of crashes, by year, resulted in a serious injury or fatality.
- The most frequent crash types in the County are fixed object, rear-end and turning. Fixed object crashes result in the highest portion of fatal and serious injury.
- Top crash causes (all crashes) include driving too fast for conditions, not yielding the right of way, following too close, and inattention. The highest portion of fatal and serious injury crashes included driving too fast for conditions, not yielding the right of way, and inattention.
- Each crash includes a combination of characteristics. The total of all crash characteristics in this regard is not intended to sum to 100%. Top crash characteristics for fatal and serious injury crashes include road departure (57%), Older drivers (65 years or older) (31%), dark or dusk or dawn (28%), horizontal curve (17%) and speed related (25%).
- Driver impairment in fatal and serious injury crashes included alcohol impaired (19%) and drug impaired (17%)
- Nearly three-quarters of crashes occurred on ODOT roads including 61% on Statewide (US 26, US 30, and US 101) and 13% on Regional/District roads (OR 53, OR 102, OR 103, or OR 202)
- Over three-quarters of fatal and serious injury crashes occurred on ODOT facilities including 67% on Statewide highways and 14% on Regional/District roads
- Over the five-year period, the months in the second half of the year (months July through December) have collectively each had more total crashes and more fatal and serious injury crashes than the months in the first half of the year.
- Emphasis areas will be used to guide the next steps of the project to determine areas of focus. The following draft emphasis areas were flagged for Task Force Consideration.
 - Roadway and lane departure
 - Nighttime
 - Risky Behavior (drugs and alcohol impairment, distracted driving, and speeding)
 - Intersections
 - Aging Drivers (65+ years of age)
 - Pedestrian
 - Motorcyclist
- Local crash data summaries are provided for various areas in the County. While these summaries will not impact the overall County-wide focus on emphasis areas or strategies, they are provided to support local planning efforts.

COUNTYWIDE CRASH DATA ANALYSIS

Crash records from the most recent five years of available comprehensive data (2019 to 2023) were obtained from the Oregon Department of Transportation (ODOT) and analyzed to assess recent trends on roadways within Clatsop County. The following sections summarize the crash trends and the crash attributes that most often led to serious injury or fatality.

CRASH DATA

ODOT crash records provide all data included on a crash report, including crash identification (jurisdiction, route and milepost, location, date, time), demographics (age, gender), environmental conditions (lighting, weather, road surface), and crash details (primary collision factor, type of collision, vehicle type, severity).

For this safety analysis, crash severity is categorized as follows:

- **Fatal (K):** A collision that results in the death of a person within 30 days of the collision.
- **Serious Injury (A):** A collision that results in life-altering injuries.
- **Minor Injury (B):** A collision that results in other visible injuries that are not life-altering, such as minor lacerations and bruising.
- **Possible Injury (C):** A collision that results in the complaint of non-visible pain/injury, such as confusion, limping, and soreness.
- **No Apparent Injury (PDO):** A collision without injury or complaint of pain but resulting in property damage to a vehicle or another object, commonly referred to as a “fender bender.”

COUNTYWIDE CRASH TRENDS

Comprehensive crash data from ODOT is provided by the Crash Analysis and Reporting Unit, who updates and maintains a database of ten years worth of crash data. That database is updated and maintained at all times and includes detailed data about every recorded crash statewide. Due to the time and efforts required to review and clean data for consistency, the most recent published full dataset is through calendar year 2023.

2024-2025 FATAL CRASH DATA

The most recent fatal crash data is required to be reported Federally, and we therefore have access to a preliminary set of initial 2024 and 2025 crash data for fatal crashes. This initial information is not comprehensive and does not include any data for any other types of crashes of less severity. This data was pulled in late July 2025 and is summarized in Table 1.

TABLE 1: 2024-2025 FATAL CRASHES IN CLATSOP COUNTY

DATE	TOTAL FATAL CRASHES
2024	7
2025*	5 (through July)

*The partial 2025 dataset includes crashes through July 30. A review of monthly trends for the last five full years of data (2019-2023) indicates that approximately 50% of the serious/fatal crashes occur annually through July.

Due to the limited and preliminary nature of the 2024-2025 dataset, these collisions were not included in the following crash analysis.

2019-2023 COMPREHENSIVE CRASH DATA

The most recent 5 years of available comprehensive crash data (2019-2023) for Clatsop County was obtained from ODOT and used to evaluate the crash history¹. Between 2019 and 2023, there were 3,217 crashes in Clatsop County over the five-year period. Of these crashes, 54 resulted in at least one fatality, and 181 resulted in a serious injury to a participant. This equates to an annual average of about 644 crashes, with 11 fatal and 37 serious injury crashes per year.

Figure 1 and Table 2 present a summary of crash severity by year. The total number of crashes has remained relatively steady between 652 and 695 crashes per year, except for 2020 (likely reflective of the overall reduction in vehicle miles traveled during the COVID-19 pandemic).

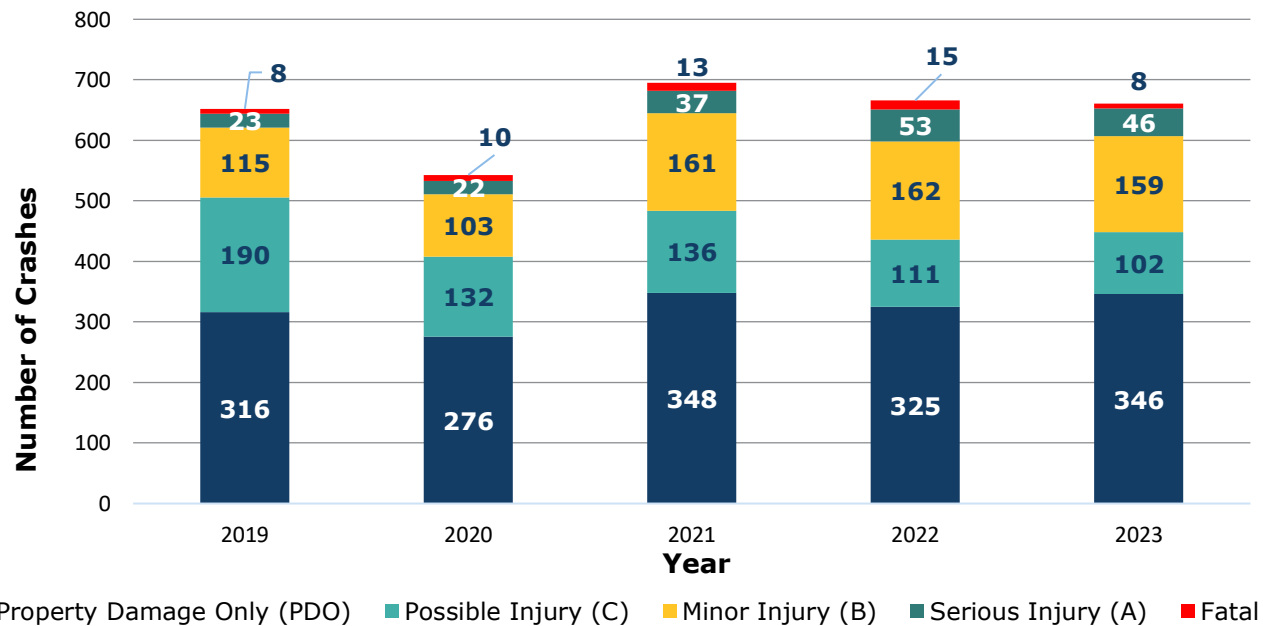


FIGURE 1. CLATSOP COUNTY CRASH SEVERITY BY YEAR (2019 TO 2023)

¹ ODOT reported collisions for January 1, 2019, through December 21, 2023

TABLE 2. SUMMARY OF CRASH SEVERITY BY YEAR (2019-2023)

CRASH SEVERITY	2019	2020	2021	2022	2023	TOTAL
FATAL (K)	8	10	13	15	8	54
SERIOUS INJURY (A)	23	22	37	53	46	181
MINOR INJURY (B)	115	103	161	162	159	700
POSSIBLE INJURY (C)	190	132	136	111	102	671
PROPERTY DAMAGE ONLY (PDO)	316	276	348	325	346	1,611
TOTAL	652	543	695	666	661	3,217

As shown in Figure 2, the proportion of fatal and serious injury crashes reached a peak of 10% of all crashes in 2022, double the proportion of 2019 crashes (5%). While the proportion of fatal and serious injury crashes was lower in 2023 than it was in 2022, the proportion of these crashes has increased overall since 2019.

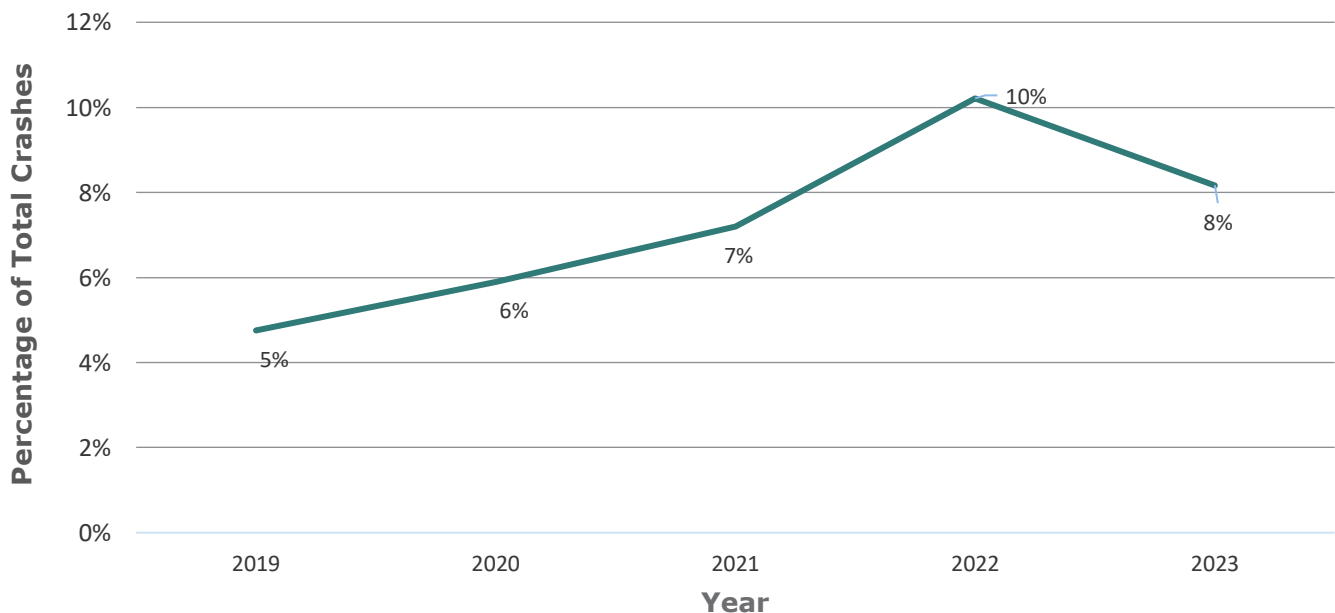


FIGURE 2. PERCENT OF FATAL OR SERIOUS INJURY CRASHES BY YEAR (2019-2023)

CRASH ATTRIBUTES

There are many crash types, causes, and characteristics represented in the thousands of crashes in this data. Many crashes include more than one crash characteristic. For instance, someone can leave the roadway and strike a fixed object, while under the influence of alcohol at night.

The most commonly occurring crash types are fixed-object, rear-end, and turning. These crash types make up nearly three-quarters of all crashes in the County. Fixed-object crash types have the highest proportion of fatal and serious injury crashes followed by head-on, rear-end, and pedestrian crashes. Top crash causes include driving too fast for conditions (but not exceeding the posted speed limit), not yielding right-of-way, following too close, and inattention. More details regarding the specifics of crash types, causes, and characteristics are described after

Table 4.

The data called out in this section specifically will inform the development of Emphasis Areas, which are statistically relevant areas of focus for safety implementation due to an increase in crash patterns and characteristics with specific attributes. Those attributes are:

- Roadway or Lane Departure Crashes
- Intersection Crashes
- Nighttime (Dark/Dawn/Dusk) Crashes
- Speed-Related Crashes
- Crashes Involving Alcohol and/or Drugs
- Crashes Involving Alcohol Only
- Crashes Involving Motorcycles
- Crashes Involving Bicyclists
- Crashes Involving Pedestrians
- Crashes Involving Distracted Drivers
- Crashes Involving Young Driver (15-21)
- Crashes Involving Aging Driver (65+)
- Crashes In Work Zones
- Crashes Involving School Bus or School Zone

These attributes are developed out of Oregon's Transportation Safety Action Plan (TSAP)'s four broad emphasis areas: Infrastructure, Risky Behaviors, Vulnerable Users, and Improved Systems. The Countywide crash data follows to inform Clatsop County's Emphasis Areas.

CRASH TYPES AND CAUSES

Table 3 summarizes the leading crash types and causes in Clatsop County using the last 5 years of available comprehensive data. Due to the complex and overlapping nature of the crash dataset, **the values in table may not add up to 100%**, but highlight some of the most frequent or impactful crash patterns in the County. The **bolded and highlighted** values in the table indicate which characteristics have a disproportionately high percentage of fatal and serious injury crashes relative to the proportion of total crashes, meaning that these crash types or contributing factors are more likely to result in severe outcomes in Clatsop County.

TABLE 3. LEADING CRASH TYPES AND CAUSES IN CLATSOP COUNTY (2019-2023)

CRASH TYPE/CAUSE	ALL SEVERITIES		FATAL AND SERIOUS INJURY (KA)	
	COUNT	PERCENTAGE	COUNT	PERCENTAGE ²
TOP CRASH TYPES				
FIXED OBJECT	920	29%	83	35%

² **Bold and highlighted** values indicate the crash attributes are more likely to result in fatal or serious injuries in Clatsop County.

CRASH TYPE/CAUSE	ALL SEVERITIES		FATAL AND SERIOUS INJURY (KA)	
	COUNT	PERCENTAGE	COUNT	PERCENTAGE ²
REAR-END	812	25%	26	11%
TURNING	533	17%	23	10%
HEAD-ON	84	3%	36	15%
ANGLE	156	5%	8	3%
PEDESTRIAN	64	2%	25	11%
BICYCLE	34	1%	7	3%
TOP CRASH CAUSES				
DRIVING TOO FAST FOR CONDITIONS (NOT EXCEEDING LIMIT)	463	15%	40	17%
DID NOT YIELD RIGHT-OF-WAY	431	14%	27	12%
FOLLOWING TOO CLOSE	322	10%	8	3%
INATTENTION	312	10%	23	10%
DROVE LEFT OF CENTER ON TWO-WAY ROAD (STRADDLING CENTER LINE)	70	2%	21	9%
OTHER (NOT IMPROPER DRIVING)	280	9%	2	1%
OTHER (IMPROPER DRIVING ³)	241	8%	20	9%
FAILED TO AVOID VEHICLE AHEAD	157	5%	4	2%
DISTRACTION	144	5%	14	6%
MADE IMPROPER TURN	104	3%	2	1%
FATIGUE	101	3%	9	4%
PASSED STOP SIGN OR RED FLASHER	79	3%	7	3%
SPEED RACING	67	2%	4	2%
VIEW OBSCURED	52	2%	5	2%
PHYSICAL ILLNESS	50	2%	12	5%

The following section offers a more detailed look at the data within commonly occurring crash types and causes. These details provide more context about the crashes than what is described in the tables above.

Additional Crash Types and Causes Detail

³ Often self-reported but can include incidents such as not following regulatory signs, vehicle stalling, or driving a defective vehicle.

Fixed Object

Collisions with a fixed object made up the highest proportion of all crash types (29%) and highest proportion of all fatal and serious injury crashes (35%). Many collisions with fixed objects involved a roadside ditch (28%) or occurred in slippery conditions (18%). The major cause for fixed object crashes was driving too fast for condition (not exceeding speed limit), 34%. These crashes commonly occurred along the curves (46%).

Rear-End

Rear-end crashes made up one quarter (25%) of all crash types, but a lower proportion resulted in serious injury or death (11%). About 38% of all rear-end crashes were caused by a driver following too close, 18% by a driver failing to avoid the vehicle ahead, and 17% by inattention. The majority of rear-end crashes occurred on a straight roadway (43%), at an intersection (29%), or on a bridge (13%).

Turning Movement

Turning movement crashes are around 17% of total crashes and 10% of fatal and serious injury crashes. Almost all the turning movement crashes occur at intersections and alleys and half of the turning movement crashes were due to not yielding the right of way.

CRASH CHARACTERISTICS AND CONDITIONS

Table 4 summarizes the leading roadway characteristics and conditions which resulted in the highest number of crashes in Clatsop County from 2019-2023.

Due to the complex and overlapping nature of the crash dataset, the values in table may not add up to 100%, but highlight some of the most frequent or impactful crash patterns in the County.

The **bolded and highlighted** values in the table indicate which characteristics have a disproportionately high percentage of fatal and serious injury crashes relative to the proportion of total crashes, meaning that these crash types or contributing factors are more likely to result in severe outcomes in Clatsop County.

TABLE 4: LEADING ROADWAY CHARACTERISTICS AND CONDITIONS IN CLATSOP COUNTY (2019-2023)

CHARACTERISTIC	ALL SEVERITIES		FATAL AND SERIOUS INJURY (KA)	
	COUNT	PERCENTAGE	COUNT	PERCENTAGE ⁴
SPEED RELATED				
SPEED RELATED	676	21%	59	25%
ROAD DEPARTURE				
VEHICLE LEFT THE ROADWAY	1085	34%	133	57%
DRIVER IMPAIRMENT				
ALCOHOL-IMPAIRED	224	7%	45	19%
DRUG-IMPAIRED	68	2%	39	17%
LIGHTING CONDITIONS				
DARK/DUSK/DAWN	798	25%	66	28%
ROAD SURFACE CONDITIONS				
WET/ICY/SNOW	1067	33%	76	32%
NON-PASSENGER CAR MOTOR VEHICLE TYPE INVOLVED				
MOTORCYCLE	64	2%	25	11%
ROADWAY CHARACTERISTIC				
AT INTERSECTION OR INTERSECTION-RELATED ⁵	988	31%	56	24%
TRAFFIC SIGNAL	164	5%	10	4%
STOP SIGN ⁶	682	21%	40	17%
STRAIGHT SEGMENT	984	31%	55	23%
HORIZONTAL CURVE	640	20%	64	27%
VERTICAL CURVE	134	4%	26	11%
ALLEY OR DRIVEWAY	267	8%	26	11%
ROAD USER DEMOGRAPHICS				
YOUNGER DRIVER (AGE <21)	244	8%	28	12%
OLDER DRIVER (AGE ≥65)	435	14%	73	31%

⁴ **Bold and highlighted** values indicate the crash attributes are more likely to result in fatal or serious injuries in Clatsop County.

⁵ Includes all intersections such as stop-controlled, yield-controlled, and signalized.

⁶ Crashes at stop-controlled intersections are only reported with this roadway characteristic when a stop sign is posted. It is not uncommon for rural intersections to not have a posted stop sign even if the intersection is considered stop-controlled.

The following section offers a more detailed look at the data within commonly occurring crash characteristics. These details provide more context about the crashes than what is described in the tables above.

Additional Crash Characteristics Details

Roadway Departure

Over half of all crashes where a vehicle left the roadway resulted in a serious injury or fatality (57%). Of those that resulted in serious injury or fatality, about 56% involved a fixed object, 42% involved alcohol or drugs, 35% involved dark lighting conditions (dawn/dusk/dark), and 34% were speed-related crashes.

Speed Related

Speed-related crashes accounted for 21% of all crashes, and 25% of fatal and serious injury crashes. Of the crashes where speed limits were known, the largest share (38%) happened on roads with a 55 mph speed limit. Approximately 34% of those crashes involved excessive or inappropriate speeding. Posted speed limit information was missing for 10% of the crash data.

Motorcycles

Motorcycle crashes made up only 2% of the total crashes in Clatsop County, but the rate at which they resulted in serious or fatal injuries is over five times that amount (11%).

Impaired Driving

While there were relatively few crashes that involved alcohol or drugs (combined, these made up less than 10% of all crashes), these crash types can cause significant harm. Crashes involving an alcohol-impaired driver or drug-impaired driver resulted in 19% and 17% of serious injury or fatal crashes, respectively. About 65% of crashes involving alcohol or drugs involved a roadway departure, 53% involved a fixed object, and 47% occurred in dark lighting conditions (dark/dawn/dusk). Roadway departures, fixed-objects, and dark conditions were also the most prominent contributing factors in serious injury and fatal crashes involving alcohol or drugs.

CRASH LOCATION

Approximately 31% of all crashes occurred at intersections or were intersection-related. Although these made up nearly one-third of all crashes, the percentage of intersection crashes that resulted in fatal or serious injuries was lower than the overall rate of crashes (24%).

Crashes that occur on a horizontal or vertical curve are likely to result in serious injury or fatality. The rate of serious injury or fatality for vertical curves (11%) is almost 3 times the rate of these crashes occurring overall (4%).

Crashes in alleyways or driveways made up 8% of all crashes, but had a higher proportion of fatal or serious injuries (11%). Notably these crashes are angle crashes, which may contribute to the severity.

Figure 3 shows the proportion of crashes by roadway ownership. There are 50 crashes which could not be accurately placed due to insufficient longitude/latitude information (represented by N/A). Most crashes occurred on state highways. **Note for the purposes of this summary that there are three state highways of “statewide level of importance” in the County (US 26, US 30, and US 101). These highways are distinguished from other state highways because they carry significantly higher traffic volumes than other state highways. All other ODOT facilities in Clatsop County are “regional and district level of importance” (including OR 202, OR 103, OR 102, OR 53)**⁷

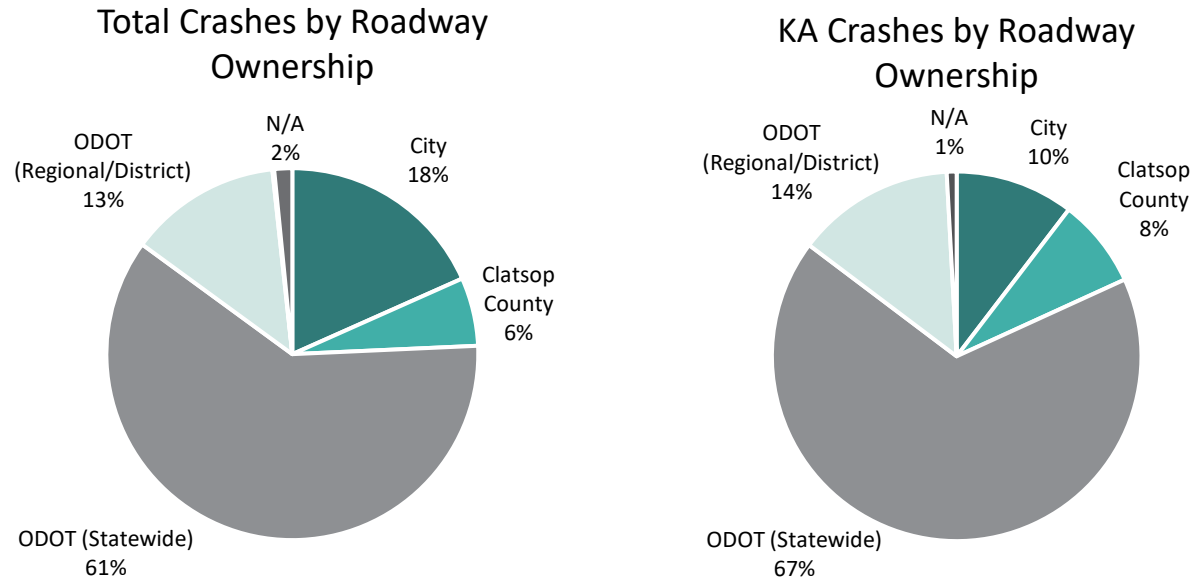


FIGURE 3. TOTAL AND KA CRASHES BY ROADWAY OWNERSHIP

YOUNGER & OLDER DRIVERS

Crashes involving a young driver (ages 15-20) resulted in 8% of all crashes and 12% of all serious injury or fatal crashes in the County. Common crash attributes include roadway or lane departures (29%), intersection crashes (35%), fixed objects (25%), dark conditions (dark/dawn/dusk) (23%), and rear-end crashes (37%). Roadway departures, dark conditions, and speeding were the most harmful contributing factors.

In total, 14% of crashes involved older people (ages 65 and older). However, these crashes resulted in 31% of all serious injury or fatal crashes. Frequent contributing factors to all crashes with older drivers include intersections (37%), rear-ends (32%), and roadway departures (29%). Crashes resulting in serious or fatal injuries were most often associated with roadway or lane departures (48%), intersection crashes (29%), and impaired driving (21%).

⁷ Oregon Highway Plan, 1999 <https://www.oregon.gov/odot/Planning/Documents/OHP.pdf>

TEMPORAL TRENDS

The following figures show when crashes occur by time of day and day of week.

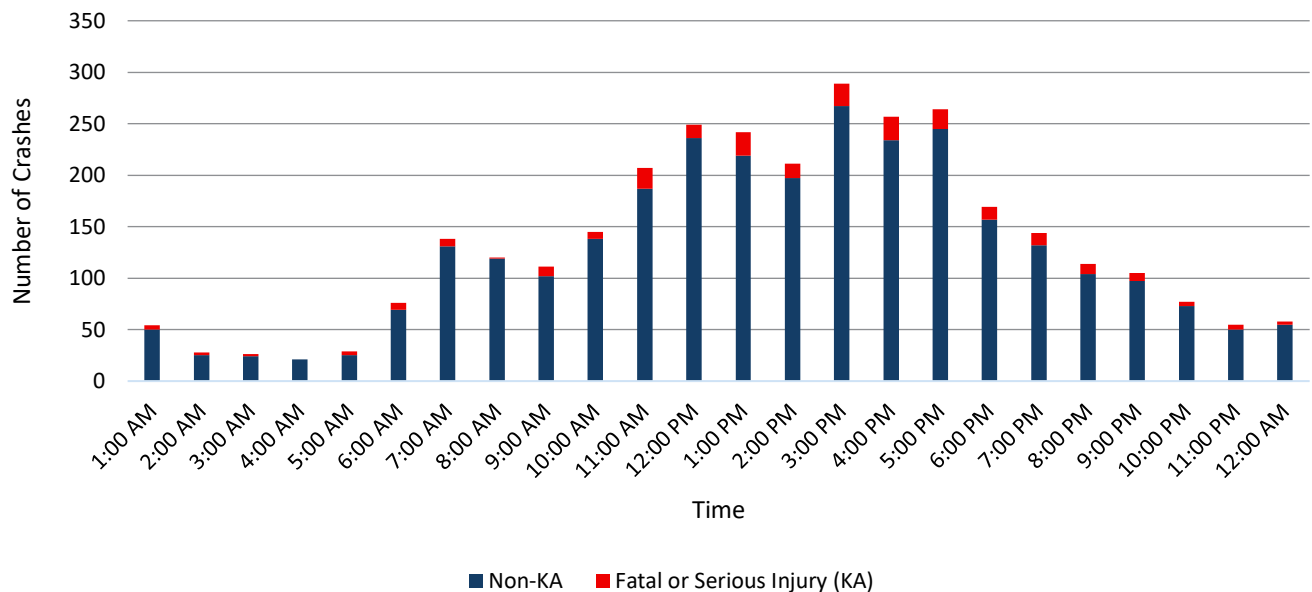


FIGURE 4. SUMMARY OF CRASHES BY TIME OF DAY (2019-2023)

Figure 4 shows the average number of crashes by hour of the day. The majority of crashes occur in the afternoon, between 12:00 PM and 5:00 PM, with a peak around 3:00 PM. This generally coincides with the PM peak travel period, when many people are leaving work or school. The most serious injuries and fatal crashes occurred at 3:00 PM (10%), 12:00 PM (8%), and 5:00 PM (6%).

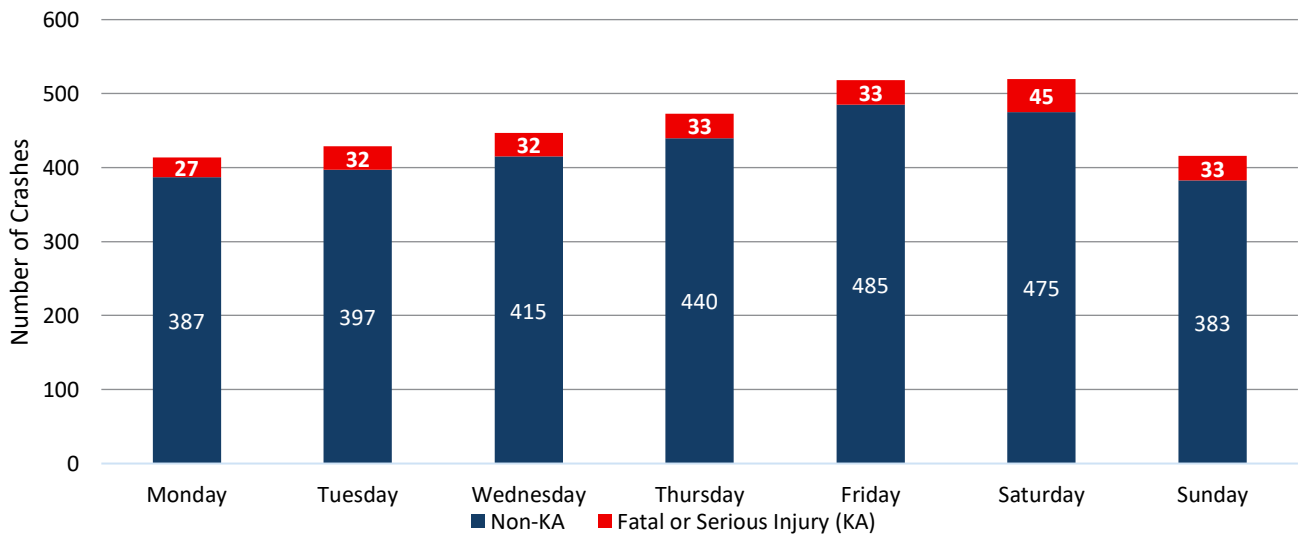


FIGURE 5. SUMMARY OF CRASHES BY DAY OF WEEK (2019-2023)

Figure 5 shows the average number of crashes per day of the week. Friday and Saturday saw the most crashes overall, and Saturday had the highest number of serious injury and fatal crashes (19% of all KA crashes). Of the Saturday KA crashes, 27% involved alcohol or drugs.

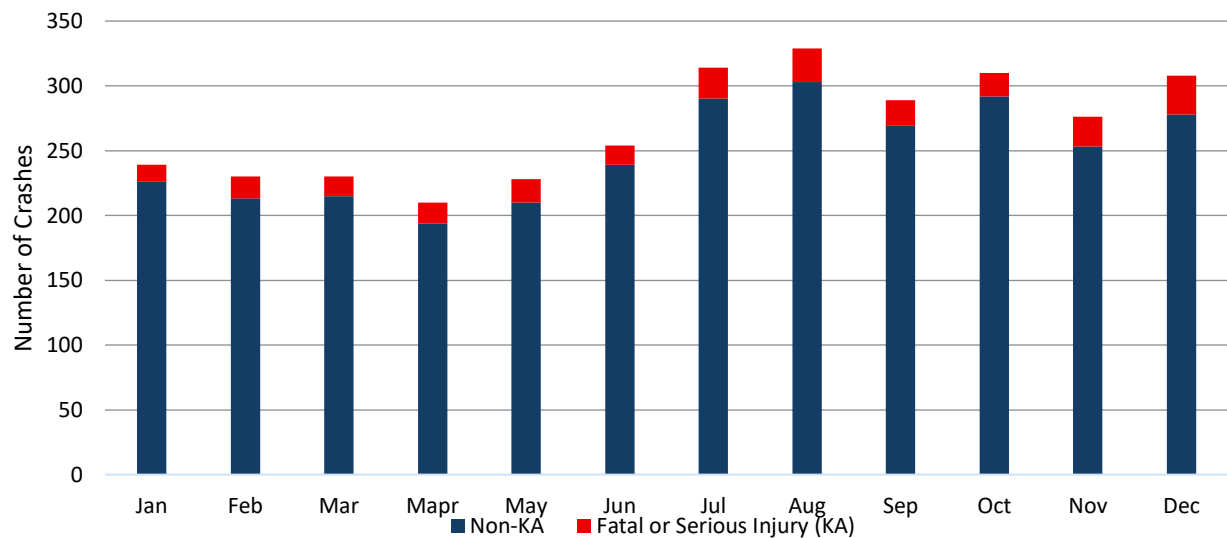


FIGURE 6. SUMMARY OF CRASHES BY MONTH (2019-2023)

Figure 6 shows the average number of crashes per month. Crashes exceeded an average of 300 per month in July, August, October, and December. The high number of crashes in July and August are likely attributed to higher volumes of traffic related to tourists and visitors in the summer. The higher number of crashes in October and December may be related to the increase in wet weather and shorter periods of daylight in the fall and early winter.

COUNTYWIDE EMPHASIS AREAS

According to the Oregon Statewide Transportation Safety Action Plan (OTSAP), Emphasis Areas provide a strategic framework for developing and implementing a Transportation Safety Action Plan (TSAP). Emphasis Areas are near-term implementation focus areas directly related to the TSAP’s long-term goals, policies, and strategies.

Preliminary Emphasis Areas were identified using a data-driven process based on crash patterns and characteristics in Clatsop County between 2019 and 2023 that frequently occurred, or frequently resulted in serious injury or fatality. The crash data analysis findings will be combined with input from project partners and the community to finalize the list of Emphasis Areas that will guide the framework of the TSAP and the County’s investment in safety strategies and projects.

CRASH DATA CHARACTERISTICS

Figure 7 shows the percentage of fatal and serious injury crash characteristics and types in the county compared to statewide crash data⁸. This comparison emphasizes the crash patterns and challenges uniquely faced by the county.

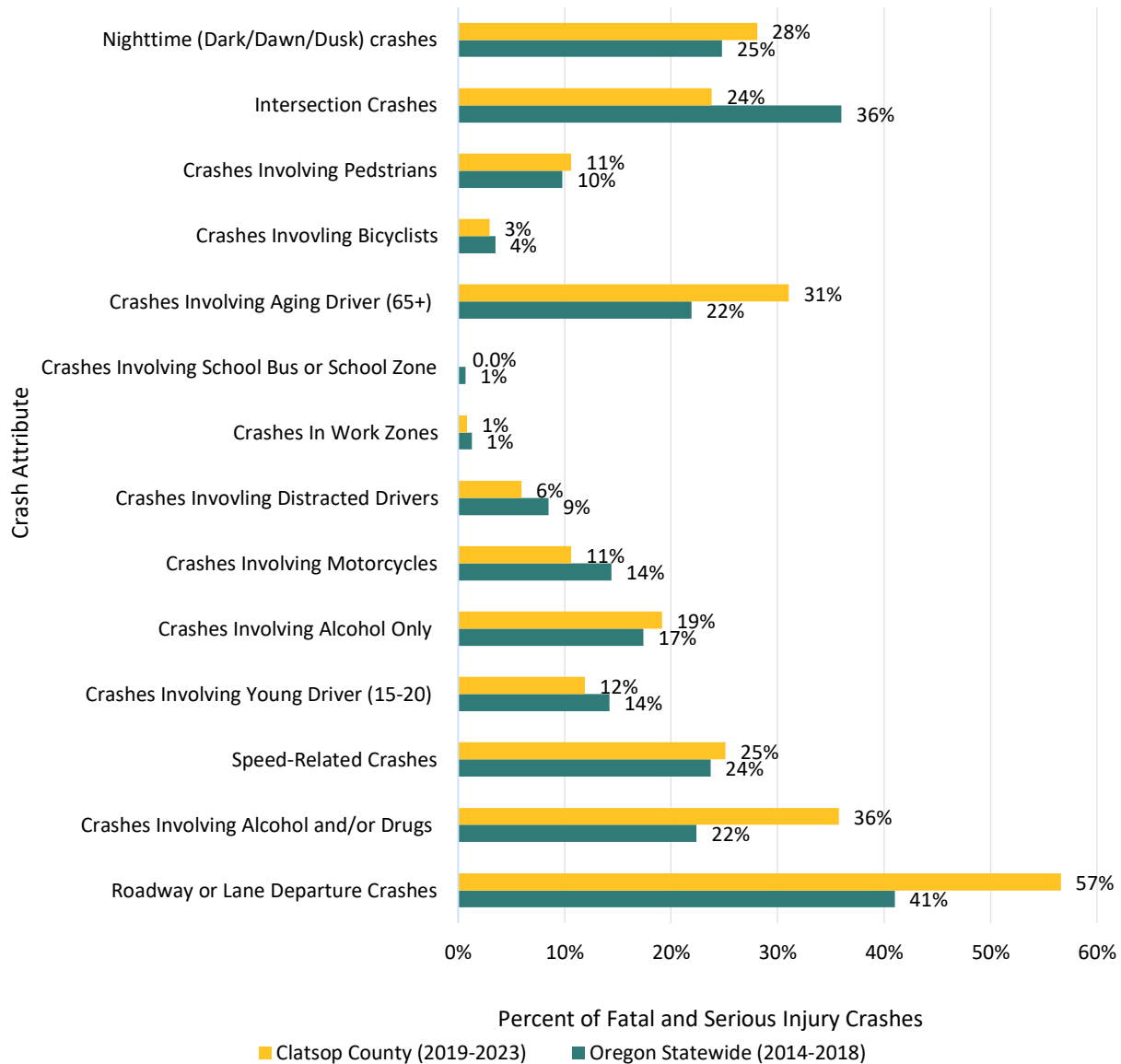


FIGURE 7. CLATSOP COUNTY EMPHASIS AREAS RELATIVE TO STATEWIDE CRASH STATISTICS

⁸ At the time of writing this document, the most recent statewide data summary published in the Oregon TSAP is for years 2014-2018 as reflected in Figure 7. Preliminary data from the on-going ODOT TSAP update (2019-2023) was reviewed and while some statewide percentages change, the relative comparison (e.g., is Clatsop County higher than the statewide average) would not change with the inclusion of the preliminary updated data.

Table 5 notes three different “flags” for each crash attribute. Attributes that meet at least two flag criteria are highlighted in yellow, and those meeting all three are shown in red. These flags help identify trends and patterns in the crash attributes and how the crashes within the Clatsop County boundary compare to statewide data.

- **Flag 1 – Predominant Crash Attribute:** The crash attribute is present in more than 10% of fatal and serious injury crashes in Clatsop County.
- **Flag 2 – More Prevalent than Statewide:** The proportion of fatal and serious injury crashes for the crash attribute on Clatsop County roadways is greater than the proportion of fatal and serious injury crashes for the crash attribute statewide as reported in the OTSAP.
- **Flag 3 – High Severity Indicator:** The proportion of fatal and serious injury crashes on Clatsop County roadways is greater than the percentage of all severity crashes on Clatsop County roadways for the crash attribute.

TABLE 5. CLATSOP COUNTY CRASH ATTRIBUTES AND FLAGS MET

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
ROADWAY OR LANE DEPARTURE CRASHES	CLATSOP KA: 57% CLATSOP ALL: 34% STATEWIDE KA: 41%	✓	✓	✓
INTERSECTION CRASHES	CLATSOP KA: 24% CLATSOP ALL: 31% STATEWIDE KA: 36%	✓	-	-
NIGHTTIME (DARK/DAWN/DUSK) CRASHES	CLATSOP KA: 28% CLATSOP ALL: 25% STATEWIDE KA: 25%	✓	✓	✓
SPEED-RELATED CRASHES	CLATSOP KA: 25% CLATSOP ALL: 21% STATEWIDE KA: 24%	✓	✓	✓
CRASHES INVOLVING ALCOHOL AND/OR DRUGS	CLATSOP KA: 36% CLATSOP ALL: 9% STATEWIDE KA: 22%	✓	✓	✓
CRASHES INVOLVING ALCOHOL ONLY	CLATSOP KA: 19% CLATSOP ALL: 7% STATEWIDE KA: 17%	✓	✓	✓
CRASHES INVOLVING MOTORCYCLES	CLATSOP KA: 11% CLATSOP ALL: 2% STATEWIDE KA: 14%	✓	-	✓

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
CRASHES INVOLVING BICYCLISTS	CLATSOP KA: 3% CLATSOP ALL: 1% STATEWIDE KA: 4%	-	-	✓
CRASHES INVOLVING PEDESTRIANS	CLATSOP KA: 11% CLATSOP ALL: 2% STATEWIDE KA: 10%	✓	✓	✓
CRASHES INVOLVING DISTRACTED DRIVERS	CLATSOP KA: 6% CLATSOP ALL: 4% STATEWIDE KA: 9%	-	-	✓
CRASHES INVOLVING YOUNG DRIVER (15-21)	CLATSOP KA: 12% CLATSOP ALL: 8% STATEWIDE KA: 14%	✓	-	-
CRASHES INVOLVING AGING DRIVER (65+)	CLATSOP KA: 31% CLATSOP ALL: 14% STATEWIDE KA: 22%	✓	✓	✓
CRASHES IN WORK ZONES	CLATSOP KA: 1% CLATSOP ALL: 1% STATEWIDE KA: 1%	-	-	-
CRASHES INVOLVING SCHOOL BUS OR SCHOOL ZONE	CLATSOP KA: 0.0% CLATSOP ALL: 0.3% STATEWIDE KA: 1%	-	-	-

Yellow = two flags met; Red = all three flags met

POTENTIAL EMPHASIS AREAS

While there is no requirement for a certain number of Emphasis Areas, selecting between four to seven Emphasis Areas is commonly used. Too many Emphasis Areas can dilute the value of the Plan with too many strategies and actions to feasibly implement, while too few can result in missed opportunities to reduce fatal and serious injury crash risks. The trends shown in red or yellow in **Error! Reference source not found.** will be discussed with the TSAP Task Force, who will ultimately recommend the Emphasis Areas for the Clatsop County TSAP. The following are potential emphasis areas for consideration:

- Roadway and Lane Departure
- Nighttime
- Risky Behaviors (Drug and Alcohol Impairment, Distracted Driving, and Speeding)
- Intersections
- Aging Drivers (65+ years of age)
- Pedestrian

- Motorcyclist

HIGH INJURY NETWORK

The High Injury Network (HIN) identifies roadway segments and intersections within the county that experience the highest concentration of fatal and serious injury crashes. These locations were determined using the Equivalent Property Damage Only (EPDO) method, which accounts for all crashes but assigns greater weight to crashes of higher severity. Of the 3,217 total crashes in the county, there were 50 crashes (1.6% of total) without sufficient data regarding their location (such as latitude and longitude) and were excluded from the HIN and any location-based analysis.

The EPDO calculation assigns different weights to each crash type based on severity, reflecting the relative societal cost. The following weighting factors from ODOT's Safety Priority Index System (SPIS) were used:

- **Fatal & Serious Injury (Injury A) Crash = 100**
- **Minor (Injury B) or Possible Injury (Injury C) Crash = 10**
- **Property Damage Only (PDO) Crash = 1**

The fatal and serious injury crashes are equivalent to 100 PDO crashes, while the minor and possible injury crashes are equivalent to 10 PDO crashes. For example, an intersection with 1 fatal, 2 serious injury, 3 minor, 4 possible injury and 6 PDO crashes, has a EPDO score calculated as:

$$\text{EPDO} = [1 (\text{fatal}) * 100] + [2 (\text{serious injury}) * 100] + [3 (\text{minor injury}) * 10] + [4 (\text{possible injury}) * 10] + 6 (\text{PDO}) = 376$$

To identify high-risk roadway segments, the EPDO rate per mile was calculated instead. To prevent smaller segments from being overrepresented, any segment shorter than a half-mile was assigned an EPDO rate based on a minimum segment length of 0.5 miles. All roadway segments are split at intersections and at the boundary of a local area (as represented in Figure 12).

To determine which roadway segments and intersections to include in the HIN (represented in the tables below) **the data is categorized into naturally clustered groups to maximize differences between classes**⁹ — in this case, EPDO scores or rates. Three classes were generated, with the highest EPDO class representing high-injury locations. Additionally, any segments or intersections with fatal or serious injury crashes not captured by this method were also included in the HIN. Later stages of this project will narrow the list down to the top 10 segments and top 10 intersections in the County.

⁹ The Natural Breaks Method (Jenks optimization) is a way to sort data into groups based on the patterns found in the data itself. The computer looks for points where there are noticeable clusters or gaps between numbers and uses those to decide where one group of values should end and the next should begin. These groups are commonly called "classes." This method keeps similar values together in the same group while making each group as different from the others as possible.

Table 6 and Table 7 present the HIN roadway segments and intersections, respectively, from highest to lowest EPDO rate/score. Corresponding HIN maps for roadway segments and intersections are shown in Figure 8, Figure 9, Figure 10, and Figure 11.

TABLE 6. HIN SEGMENTS IN CLATSOP COUNTY

REF #	SEGMENT LOCATION	OWNER	MAP QUADRANT	LENGTH (MILES)	FATAL CRASHES	SERIOUS INJURY CRASHES	TOTAL CRASHES	EPDO PER MILE
1	Highway 30 (Liberty Lane to SW boundary of Astoria)	ODOT	NW	0.57	0	4	25	912
2	Highway 101 (SE Neptune Dr to Warrenton east border)	ODOT	NW	1.73	0	7	86	669
3	E Harbor Dr (NE King Ave to private driveway 400' east of NE Heron Ave)	ODOT	NW	0.20	1	2	9	648
4	Highway 101 (Astoria west border to W Marine Dr)	ODOT	NW	0.41	0	2	24	642
5	W Marine Dr [Hwy 101] (Hamburg Ave to Portway St)	ODOT	NW	0.17	0	2	21	636
6	Highway 30 (Millcreek Rd to Liberty Lane)	ODOT	NW	0.38	1	1	7	597
7	Astoria Bridge (Hwy 101 to Astoria north border)	ODOT	NW	0.82	2	2	20	585
8	Hwy 26 (Hwy 103 to Jewell/Elsie border)	ODOT	SE	0.62	1	2	14	514
9	Highway 101 (Sunset Beach Lane to Cullaby Lake Lane)	ODOT	NW	0.31	0	2	14	486
10	Highway 101 (Sea Ridge Lane to Pacific Way)	ODOT	SW	0.25	0	2	9	486
11	Highway 30 (OR Dept of Forestry roads: Headwaters Rd to Larkinggreen Rd)	ODOT	NE	0.43	1	1	9	466
12	Highway 101 (Cullaby Lake Lane to Bing Lane)	ODOT	NW	0.45	2	0	8	426
13	Astoria-Megler Bridge (Clatsop County north border to Astoria north border)	ODOT	NW	2.98	2	6	43	341
14	Highway 101 (Windsewpt Rd to Glenwood Village)	ODOT	NW	0.27	0	1	15	336
15	Highway 30 (Ziak Gnat Creek Lane to Gnat Creek Rd)	ODOT	NE	1.10	0	3	11	314
16	Highway 101 (High Life Adventure Park to Underhill Rd)	ODOT	SW	1.52	1	2	26	314
17	Highway 101 (S Hemlock St to Ruby St)	ODOT	SW	0.74	1	1	8	313
18	S Roosevelt Dr [Hwy 101] (Avenue B and Avenue C)	ODOT	SW	0.04	0	1	8	304

REF #	SEGMENT LOCATION	OWNER	MAP QUADRANT	LENGTH (MILES)	FATAL CRASHES	SERIOUS INJURY CRASHES	TOTAL CRASHES	EPDO PER MILE
19	N Roosevelt Dr [Hwy 101] (17th Ave to 24th Ave)	ODOT	SW	0.40	1	0	9	288
20	Highway 101 (Glenwood Village Rd to Turley Lane)	ODOT	NW	0.13	0	1	8	268
21	Highway 202 (North Fork Klaskanine River to Simmons Ridge Rd)	ODOT	NE	1.29	0	3	9	266
22	Warrenton Dr (NW 13th St to Nygaard Logging Driveway)	ODOT	NW	0.16	0	1	5	262
23	Highway 202 (Ordway Lane to Danner Ridge Lane)	ODOT	NW	1.53	0	3	20	261
24	W Marine Dr [Hwy 30] (Basin St to Bay St)	ODOT	NW	0.14	0	1	9	252
25	Hwy 26 (Jewell/Elsie border to Clatsop County south border)	ODOT	SE	8.27	2	13	112	250
26	Highway 101 (Bing Lane to W Anderson Rd)	ODOT	NW	0.56	0	1	9	243
27	Highway 30 (Parker Lane to Grove Lane)	ODOT	NE/NW	4.45	5	3	58	238
28	Highway 101 (Hwy 101 Business to SE Ensign Lane)	ODOT	NW	0.51	0	1	5	237
29	W Marine Dr [Hwy 101] (Antwerp St to S Denver Ave)	ODOT	NW	0.27	0	1	5	226
30	Marine Dr (6th St to 7th St)	ODOT	NW	0.05	1	0	3	222
31	Highway 101 (Turley Lane to Sunset Beach Lane)	ODOT	NW	0.62	0	1	11	222
32	W Marine Dr (Alameda Ave to Hanover St)	ODOT	NW	0.28	0	1	3	222
33	Highway 101 Business (G Rd to Juniper Rd)	ODOT	NW	0.12	0	1	2	220
34	Lief Erikson Dr (36th St to 37th St)	ODOT	NW	0.07	0	1	2	220
35	Lief Erikson Dr (46th St to 49th St)	ODOT	NW	0.25	0	1	2	220
36	W Marine Dr [Hwy 30] (west of 2nd St)	ODOT	NW	0.04	1	0	2	220
37	N Wahanna Rd (Shore Tier to Broadway St)	Seaside	SW	0.25	0	1	2	220
38	Highway 202 (Youngs River Rd to Lillenas Rd)	ODOT	NW	1.69	0	3	12	209
39	Highway 101 Business (Juniper Rd to Lewis and Clark Rd)	ODOT	NW	0.31	0	1	4	206

REF #	SEGMENT LOCATION	OWNER	MAP QUADRANT	LENGTH (MILES)	FATAL CRASHES	SERIOUS INJURY CRASHES	TOTAL CRASHES	EPDO PER MILE
40	Commercial St [Hwy 30] (10th St to 11th St)	ODOT	NW	0.05	0	1	3	204
41	Highway 30 (Hillcrest Loop to Abbott Rd)	ODOT	NE	0.27	1	0	3	204
42	Highway 101 N (Airport Rd to Seaside Airport Lane)	ODOT	SW	0.15	0	1	2	202
43	Lake Dr (Iredale St to 3rd Ave)	Warrenton	NW	0.08	1	0	2	202
44	N Wahanna Rd (Lewis and Clark Rd to Donnerberg Rd)	Clatsop County	SW	0.24	1	0	2	202
45	54th St (Leif Erikson Dr to Ash St)	Astoria	NW	0.18	0	1	1	200
46	Alameda Ave (Lincoln St to Columbia Ave)	Astoria	NW	0.04	0	1	1	200
47	Avenue B (S Holladay Dr to S Roosevelt Dr [Hwy 101])	Seaside	SW	0.09	0	1	1	200
48	Broadway St (Hwy 101 to S Lincoln St)	Seaside	SW	0.05	1	0	1	200
49	Brownsmead Dike Ln (Schultz Lane to Jackson Rd)	Clatsop County	NE	0.17	1	0	1	200
50	Franklin Ave (2nd St to 3rd St)	Astoria	NW	0.05	0	1	1	200
51	High Ridge Rd (Highlands Lane to private driveway 250' south of Highlands Golf Course gate)	PUBLIC	NW	0.17	0	1	1	200
52	Highway 101 (Oster Rd to G St)	ODOT	SW	0.0030	1	0	1	200
53	Highway 202 (Cedar Bay Rd to Dyblie Lane)	ODOT	NW	0.04	0	1	1	200
54	Hillcrest Loop (Supple Rd to private unnamed road [Knappa Fire Station])	Clatsop County	NE	0.05	0	1	1	200
55	Delaura Beach Ln (Moore Rd to SW Juniper Ave)	Clatsop County	NW	0.07	0	1	1	200
56	Ecola State Park Rd (N Ash St to 8th St)	ODOT	SW	0.08	1	0	1	200
57	Highway 101 (Willow Pond Lane to Adair Lane)	ODOT	NW	0.15	0	1	1	200
58	Highway 30 (Valley Creek Lane to Ziak Gnat Creek Lane detour route)	ODOT	NE	0.13	0	1	1	200
59	Logan Rd (Monterose Ct to Dietrich Rd)	Clatsop County	NW	0.17	0	1	1	200
60	S Roosevelt Dr [Hwy 101] (Avenue P and Avenue Q)	ODOT	SW	0.06	0	1	1	200

REF #	SEGMENT LOCATION	OWNER	MAP QUADRANT	LENGTH (MILES)	FATAL CRASHES	SERIOUS INJURY CRASHES	TOTAL CRASHES	EPDO PER MILE
61	W Grand Ave (W Lexington Ave to Chelmsford St)	Astoria	NW	0.26	1	0	1	200
62	Highway 26 (Necanicum View Dr to west Jewell/Elsie border)	ODOT	SW/SE	17.61	11	15	174	194
63	Lewis & Clark Rd (Fort Clatsop Rd to Patterson Lane)	Clatsop County	NW	0.52	0	1	1	193
64	Highway 202 (Bonneville Powerline Rd [Crosel Creek] to 450' north of Farm Lane)	ODOT	NW	0.69	0	1	5	191
65	Highway 101 (Warrenton east border to Astoria west border)	ODOT	NW	0.31	0	0	14	172
66	Coxcomb Dr (Madison Ave to Astoria Column Park)	Astoria	NW	0.61	0	1	4	169
67	Highway 101 (Cranberry Acres Rd to Perkins Lane)	ODOT	NW	0.71	1	0	9	166
68	Highway 26 (Jewell/Elsie west border to Kamy Lane)	ODOT	SE	1.00	0	1	10	164
69	Highway 30 (Svenson Junction to Ivy Station Rd)	ODOT	NE	1.33	0	1	24	160
70	Logan Rd (Dietrich Rd to Stavebold Mainline)	Clatsop County	NW	0.67	0	1	1	149
71	Youngs River Rd (Youngs River Falls Park Rd to Moosmoos Creek)	Clatsop County	NW	0.69	0	1	2	147
72	Old Highway 30 - Knappa (Eddie Point Rd to Waterhouse Rd)	Clatsop County	NE	0.79	0	1	2	138
73	Highway 101 (Feidenheimer Forest Preserve to Circle Creek overpass)	ODOT	SW	0.87	0	1	4	129
74	Pipeline Rd (West Fork Bear Creek to Svenson Market Rd)	Clatsop County	NE	0.81	1	0	1	124
75	Highway 101 Business (SE Airport Lane to Airport Dike Trailhead)	ODOT	NW	0.97	0	1	9	121
76	Youngs River Rd (Binder Slough Lane to Casey Slough)	Clatsop County	NW	1.01	1	0	2	109
77	Highway 30 (Bradley State Scenic Viewpoint to Taylorville Rd)	ODOT	NE	3.57	1	1	33	105
78	Old Highway 30 - Svenson (Conroy Rd to Koppisch Rd)	Clatsop County	NE	0.97	0	1	1	103
79	Hwy 103 (Hwy 26 to Mullenbach Lane)	ODOT	SE	3.49	0	3	12	101
80	Highway 101 (Old Cannon Beach Rd to E Sunset Blvd)	ODOT	SW	1.34	0	1	10	95

REF #	SEGMENT LOCATION	OWNER	MAP QUADRANT	LENGTH (MILES)	FATAL CRASHES	SERIOUS INJURY CRASHES	TOTAL CRASHES	EPDO PER MILE
81	Highway 202 (Rhodes Rd to Jewell/Elsie east border)	ODOT	SE	1.35	0	1	1	74
82	Highway 53 (County Line Rd to North Fork Nehalem River)	ODOT	SW	2.37	0	1	6	48
83	Nicolai Mainline (Nicolai off-highway vehicle staging area to Nicolai off-highway vehicle view campground)	Private	NE	3.15	1	0	2	35
84	Shingle Mill Rd (Hwy 30 to Simonsen Rd)	Private	NE	6.39	0	2	2	31
85	Highway 53 (E Summit Rd to Buchanan Creek)	ODOT	SW	3.75	1	0	6	30
86	Lewis & Clark Rd (Logan Rd to Crown Camp Rd)	Clatsop County	NW	5.00	1	0	8	29
87	Lower Nehalem Rd (Spruce Creek Run Rd to Clatsop County south border)	Clatsop County	SE	5.36	1	0	1	19

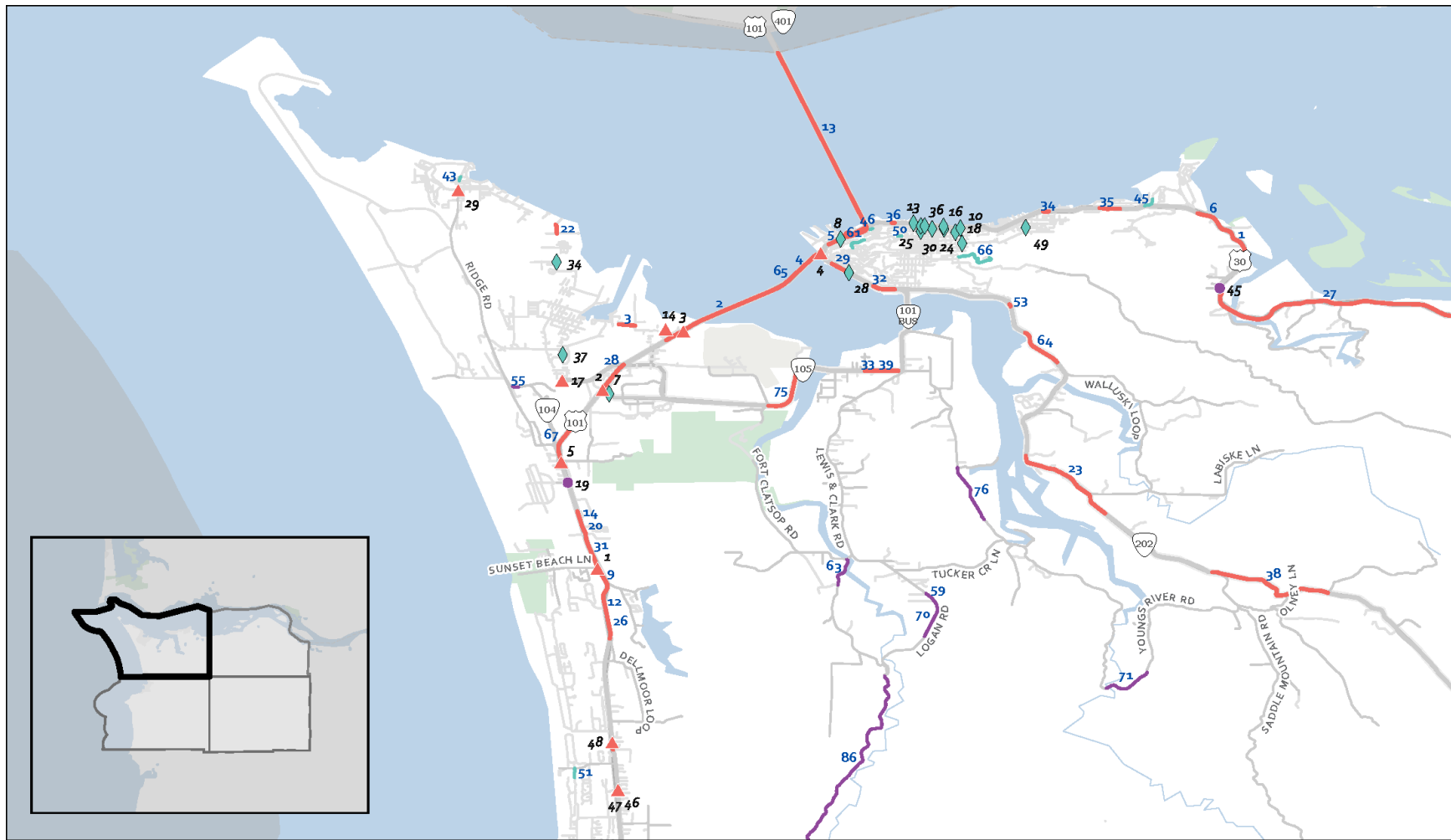
As noted above Table 5 shows the HIN Intersections in Clatsop County.

TABLE 7. HIN INTERSECTIONS IN CLATSOP COUNTY

REF #	SEGMENT LOCATION	OWNER	MAP QUADRANT	FATAL CRASHES	SERIOUS INJURY CRASHES	TOTAL CRASHES	EPDO SCORE
1	Oregon Coast Hwy (Hwy 101) & Sunset Beach Lane	ODOT	NW	1	3	20	506
2	Oregon Coast Hwy (Hwy 101) & SE Ensign Lane	ODOT	NW	0	2	24	321
3	Oregon Coast Hwy (Hwy 101 N) & E Harbor Dr	ODOT	NW	0	2	13	265
4	Oregon Coast Hwy (Hwy 101) & W Marine Dr	ODOT	NW	0	1	36	243
5	Oregon Coast Hwy (Hwy 101) & OR-104	ODOT	NW	0	2	8	242
6	Oregon Coast Hwy (Hwy 101) & Lewis and Clark Rd	ODOT	SW	0	2	8	233
7	SE Discovery Lane & SE Ensign Lane	Warrenton	NW	0	1	19	208
8	W Marine Dr (Hwy 101) & Portway St	Astoria	NW	0	1	10	154
9	Exchange St & 16th St	Astoria	NW	0	1	16	151
10	Marine Dr (Hwy 30) & 17th St	Astoria	NW	1	0	9	144
11	S Roosevelt Dr (Hwy 101) & Avenue S	Seaside	SW	0	1	6	141

REF #	SEGMENT LOCATION	OWNER	MAP QUADRANT	FATAL CRASHES	SERIOUS INJURY CRASHES	TOTAL CRASHES	EPDO SCORE
12	Columbia River Hwy (Hwy 30) & Hillcrest Loop	Clatsop County	NE	1	0	6	141
13	Marine Dr (Hwy 30) & 6th St	Astoria	NW	0	1	7	133
14	SE Neptune Dr & E Harbor Dr	ODOT	NW	0	1	7	133
15	S Roosevelt Dr (Hwy 101) & Avenue A	Seaside	SW	0	1	8	125
16	Marine Dr (Hwy 30) & 14th St	Astoria	NW	0	1	5	122
17	Fort Stevens Hwy Spur & S Main Ave	ODOT	NW	0	1	5	122
18	Irving Ave & 17th St	Astoria	NW	0	1	4	121
19	Oregon Coast Hwy (Hwy 101) & Patriot Way	Clatsop County	NW	0	1	4	121
20	Columbia River Hwy (Hwy 30) & Svenson Island Rd	ODOT	NE	0	1	3	120
21	N Roosevelt Dr (Hwy 101) & 12th Avenue	Seaside	SW	0	1	8	116
22	S Roosevelt Dr (Hwy 101) & Avenue I	Seaside	SW	0	1	5	113
23	Oregon Coast Hwy (Hwy 101 N) & Pacific Way	ODOT	SW	0	1	5	113
24	Commercial St (Hwy 30) & 14th St	Astoria	NW	0	1	4	112
25	Marine Dr (Hwy 101) & 8th St	Astoria	NW	0	1	4	112
26	Duane St & 8th St	Astoria	NW	0	1	3	111
27	Oregon Coast Hwy (Hwy 101 N) & E Sunset Boulevard	Cannon Beach	SW	1	0	3	111
28	W Marine Dr (Hwy 101) & S Denver Avenue	Astoria	NW	0	1	3	111
29	Pacific Dr & Lake Dr	ODOT	NW	0	1	3	111
30	Commercial St (Hwy 30) & 11th St	Astoria	NW	0	1	2	110
31	S Roosevelt Dr (Hwy 101) & Avenue K	Seaside	SW	0	1	2	110
32	Columbia River Hwy (Hwy 30) & Taylorville Rd	ODOT	NE	0	1	2	110
33	N Roosevelt Dr (Hwy 101) & 17th Avenue	Seaside	SW	0	1	3	102
34	NW 9th St & NW Warrenton Dr	Warrenton	NW	0	1	2	101
35	Columbia River Hwy (Hwy 30) & Valley Creek Lane	ODOT	NE	0	1	2	101
36	Marine Dr (Hwy 101) & 9th St	Astoria	NW	0	1	2	101
37	S Main Ave & SE 10th Place	Warrenton	NW	0	1	2	101
38	Columbia River Hwy (Hwy 30) & Unnamed Private Rd (~2000' east of Valley Creek Lane)	ODOT	NE	0	1	1	100
39	N Holladay Dr & 15th Avenue	Seaside	SW	0	1	1	100

REF #	SEGMENT LOCATION	OWNER	MAP QUADRANT	FATAL CRASHES	SERIOUS INJURY CRASHES	TOTAL CRASHES	EPDO SCORE
40	Beach Dr & Avenue T	Seaside	SW	0	1	1	100
41	S Downing St & Avenue T	Seaside	SW	0	1	1	100
42	S Wahanna Rd & Cooper St	Seaside	SW	0	1	1	100
43	Spruce St & E 2nd St	Cannon Beach	SW	0	1	1	100
44	Ogier Lane & Hillcrest Loop	Private	NE	0	1	1	100
45	Columbia River Hwy (Hwy 30) & Parker Lane	Clatsop County	NW	0	1	1	100
46	Oregon Coast Hwy (Hwy 101 N) & Shamrock Rd	ODOT	NW	0	1	1	100
47	Oregon Coast Hwy (Hwy 101 N) & Wakeman Lane	ODOT	NW	1	0	1	100
48	Oregon Coast Hwy (Hwy 101) & Willow Pond Lane	ODOT	NW	0	1	1	100
49	Harrison Ave & 33rd St	Astoria	NW	0	1	1	100



High Injury Network (HIN) Segments & Intersections

- State Highway
- County Road
- City Street
- Private Street

- ▲ State Intersection
- County Intersection
- ◆ City Intersection
- + Private Intersection

Reference number corresponds with HIN Segments Table

Reference number corresponds with HIN Intersections Table



FIGURE 8. HIGH INJURY NETWORK CLATSOP COUNTY (NW QUADRANT)

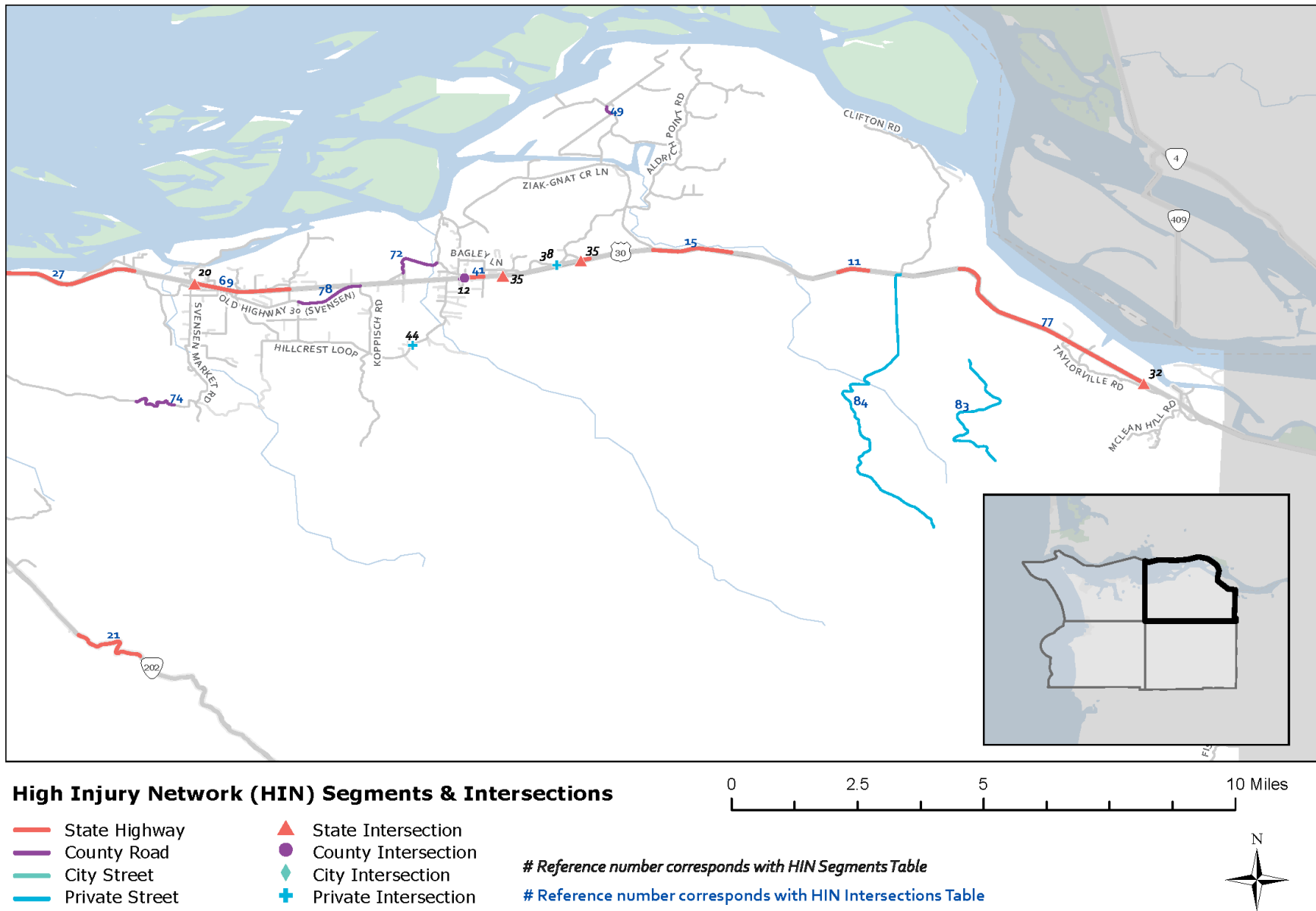


FIGURE 9. HIGH INJURY NETWORK CLATSOP COUNTY (NE QUADRANT)

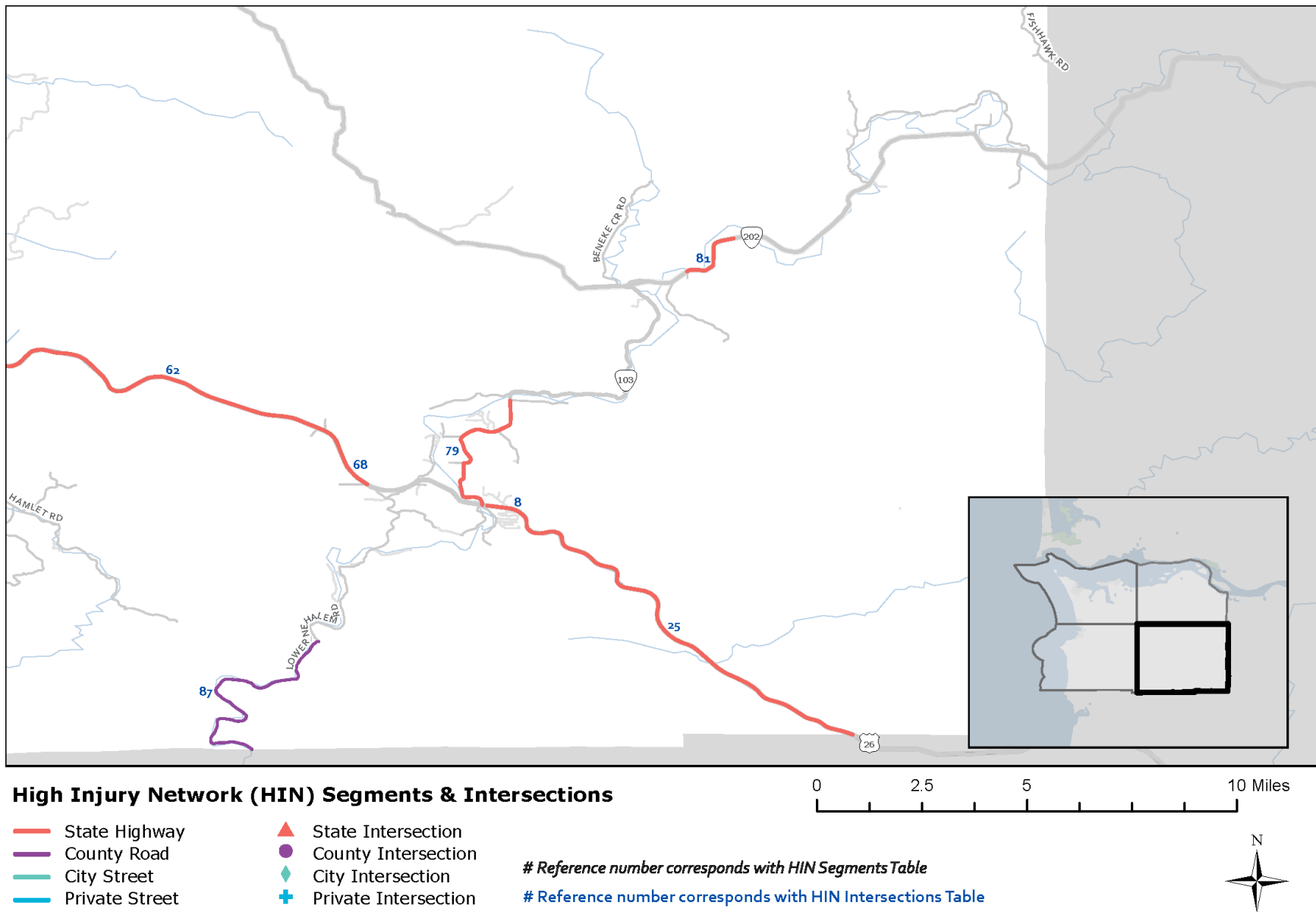


FIGURE 10. HIGH INJURY NETWORK CLATSOP COUNTY (SE QUADRANT)

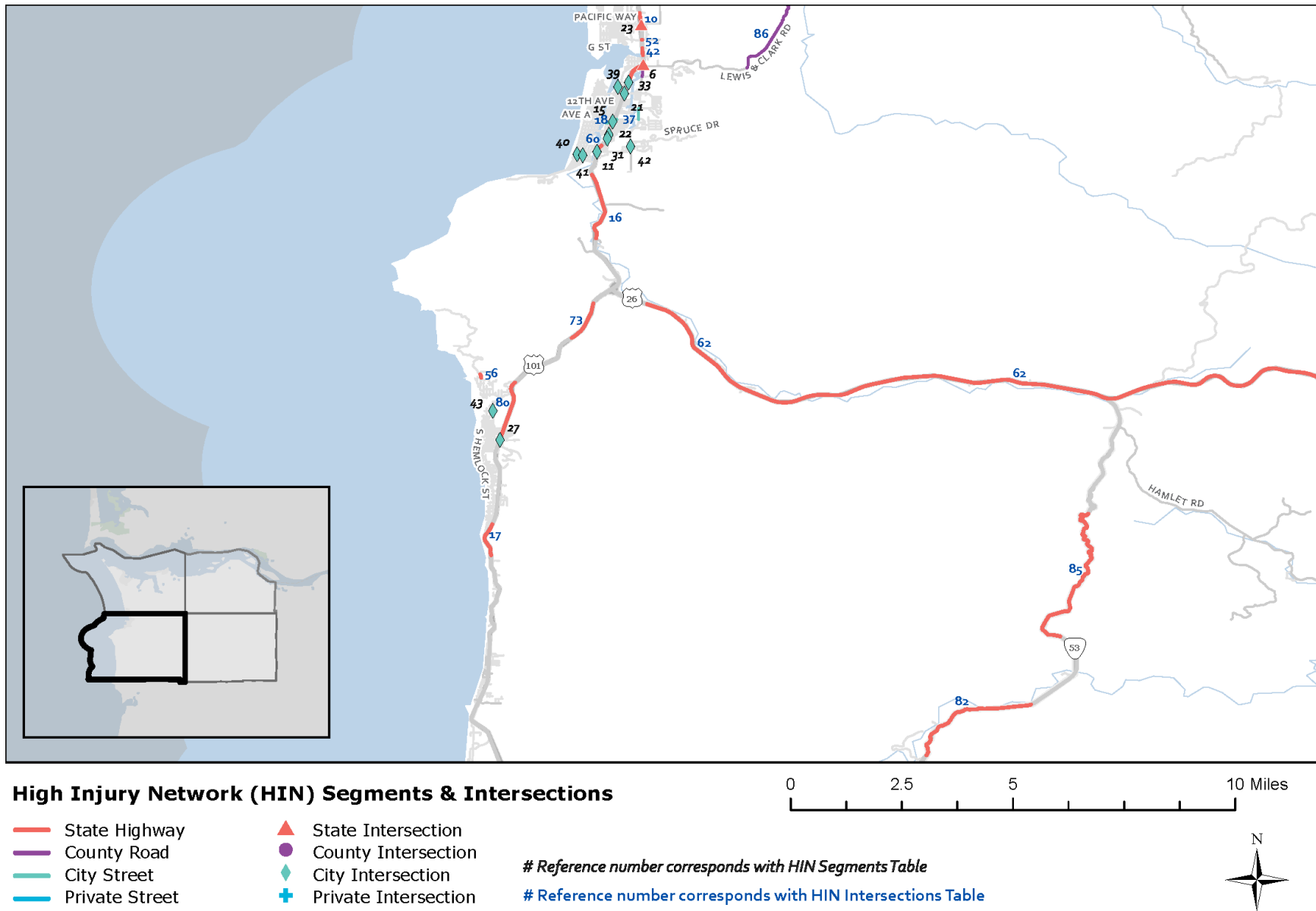


FIGURE 11. HIGH INJURY NETWORK CLATSOP COUNTY (SW QUADRANT)

LOCAL CRASH DATA ANALYSIS

Clatsop County includes a range of urban and rural communities, resulting in varied crash patterns and trends throughout the County. To better understand existing local safety conditions, crash data was also summarized for the following areas to support future local planning efforts:

- City of Astoria
- City of Warrenton
- City of Gearhart
- City of Seaside
- City of Cannon Beach
- Knappa/Svensen (including portion of US 30),
- Jewell/Elsie (including portions of US 26, OR 202, and OR 103)
- Arch Cape/Cove Beach (including portion of US 101)
- Westport (including portion of US 30)

Figure 12 shows the location of each of these local areas. Boundaries for urban areas are based on the city limits (which have been adjusted in some places to include portions of major highways that run through or along the borders). Rural communities are bound by their census-designated place (CDP) boundary or other appropriate boundary. Of the 3,217 total crashes in the county, approximately 2,058 crashes occurred inside these boundaries (64% of total), 116 of which were KA crashes (49% of all KA crashes).

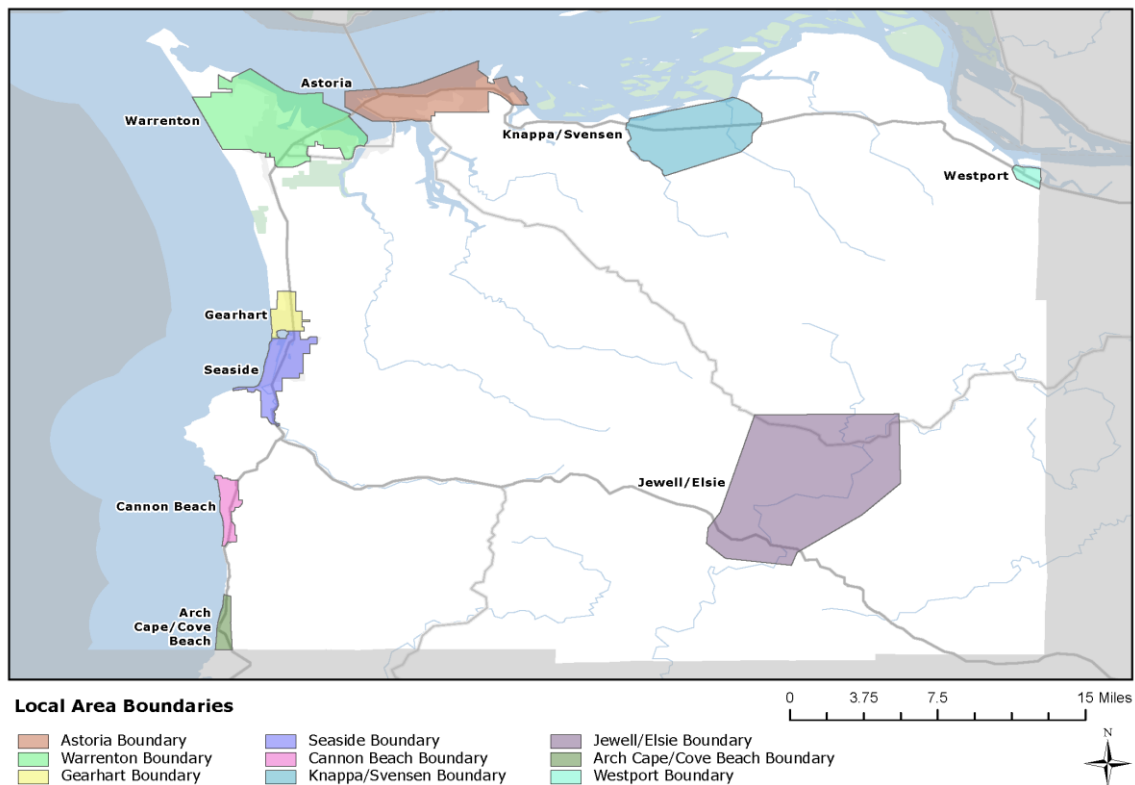


FIGURE 12. LOCAL STUDY AREA BOUNDARIES

SUMMARY OF CRASHES

From 2019 to 2023, there were 768 crashes in the city of Astoria, 41 of which resulted in fatal or serious injuries. Countywide, this represents 23.8% of all crashes and 17.4% of all KA crashes, respectively.

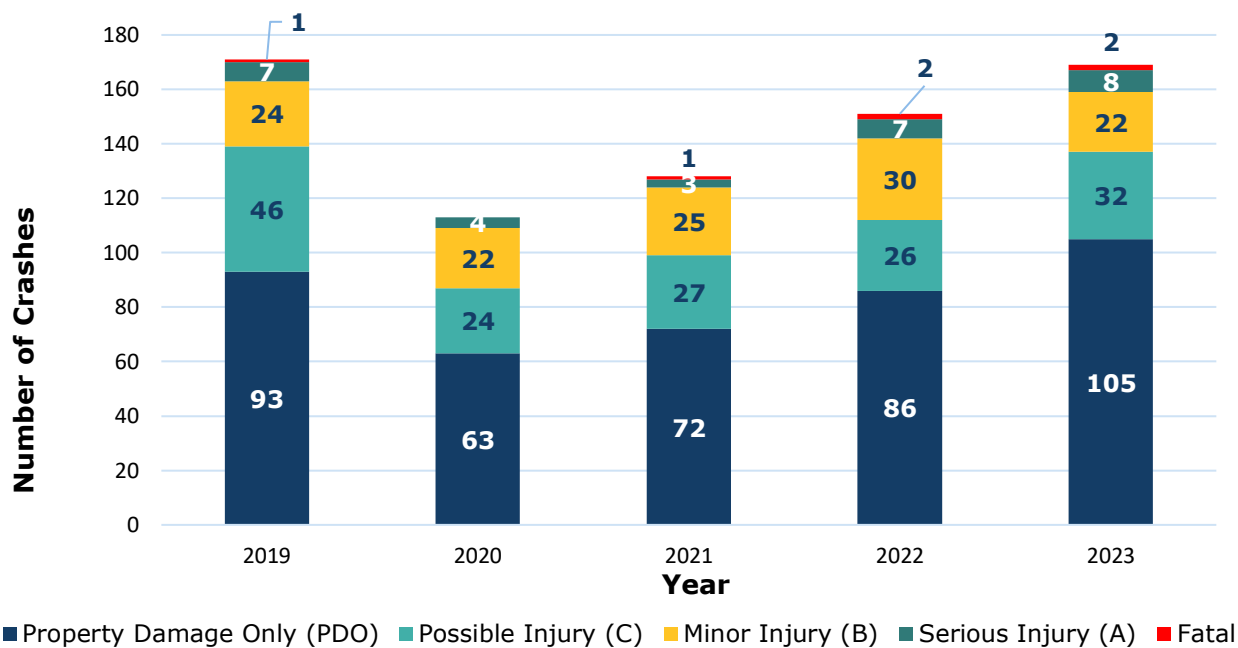


FIGURE 13. CITY OF ASTORIA CRASH SEVERITY BY YEAR (2019 TO 2023)

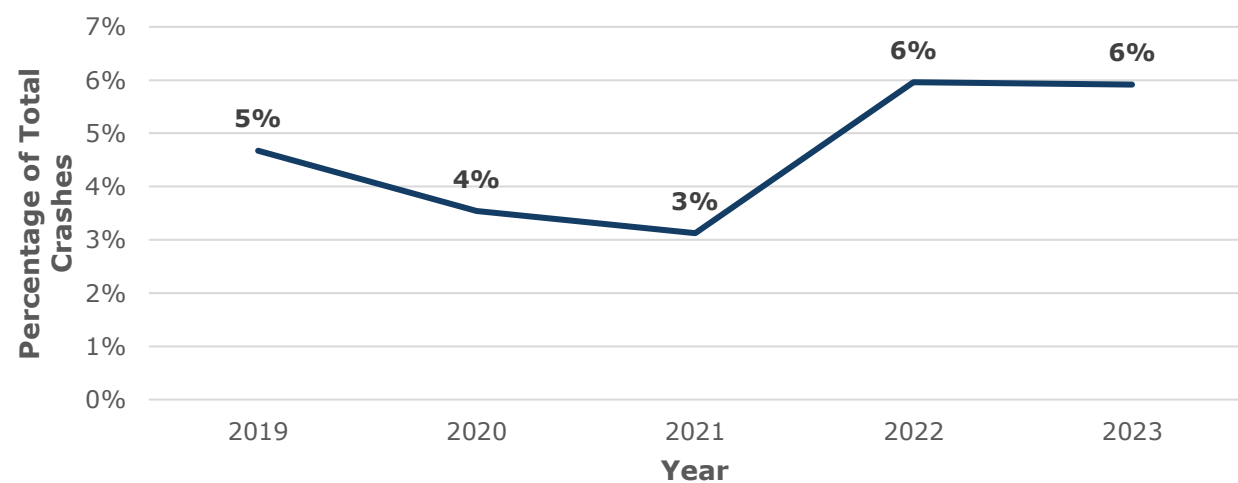


FIGURE 14. PROPORTION OF FATAL AND SERIOUS INJURY CRASHES IN THE CITY OF ASTORIA BY YEAR (2019-2023)

LOCAL CRASH TRENDS

Crash Types

Figure 15 shows the most frequent crash types and the crash types that most often result in serious injury or fatality (KA). Crash types that are 2% or less are not shown in the figure.

The City of Astoria's most common crash types are turning vehicles, rear-end collisions, fixed-object, and sideswipe overtaking. Crashes involving a pedestrian made up 4% of the total crashes in the City of Astoria, but accounted for 24% of crashes resulting in serious injury or fatality. Seventy percent of KA crashes involving a pedestrian were at an intersection.

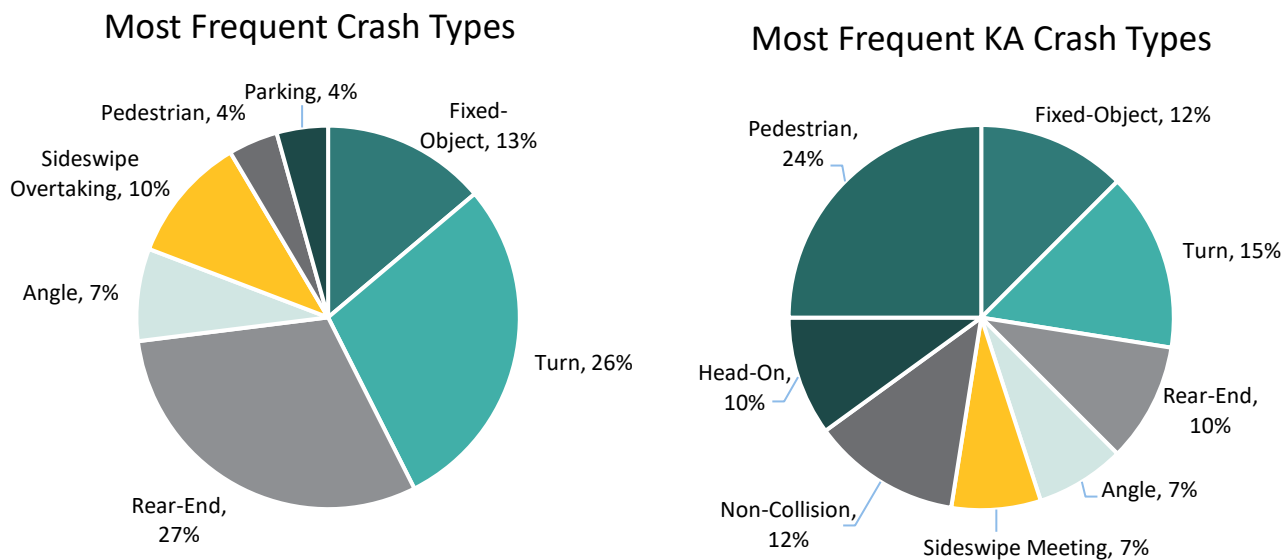


FIGURE 15. COMMON CRASH TYPES IN THE CITY OF ASTORIA, TOTAL AND THOSE RESULTING IN FATAL OR SERIOUS INJURY (KA) (2019-2023)

Crash Causes

Crashes in this area were most frequently caused by not yielding the right-of-way (25%), inattention (14%), and following too closely (9%). Failing to yield the right-of-way caused the most serious injury and fatal crashes of all types (23% of KA crashes).

Crash Attributes

Crash attributes that had a significantly higher proportion of KA crashes than total crash occurrences (10% increase or greater) include crashes during wet, icy, or snowy conditions (37% KA), roadway and lane departure (37% KA), involved drivers 65+ (32% KA), during dark, dusk, or dawn (27% KA), and those involving a motorcycle (15% KA).

EMPHASIS AREAS

Table 8 shows the relationship between various crash attributes and statewide averages, all local crashes, and local crashes involving fatalities or serious injuries (KA crashes). Attributes that meet at least two flag criteria are highlighted in yellow, and those meeting all three are shown in red.

(The flag criteria are explained in detail before Table 5.) These flagged attributes point to key safety issues in the region and should help inform the selection of emphasis areas. In general, the more flags an attribute has, the more significant its potential impact on roadway safety.

TABLE 8. CITY OF ASTORIA CRASH ATTRIBUTES AND FLAGS MET

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
ROADWAY OR LANE DEPARTURE CRASHES	ASTORIA KA: 37% ASTORIA ALL: 22% STATEWIDE KA: 41%	✓	-	✓
INTERSECTION CRASHES	ASTORIA KA: 34% ASTORIA ALL: 47% STATEWIDE KA: 36%	✓	-	-
NIGHTTIME (DARK/DAWN/DUSK) CRASHES	ASTORIA KA: 27% ASTORIA ALL: 12% STATEWIDE KA: 25%	✓	✓	✓
SPEED-RELATED CRASHES	ASTORIA KA: 20% ASTORIA ALL: 13% STATEWIDE KA: 24%	✓	-	✓
CRASHES INVOLVING ALCOHOL AND/OR DRUGS	ASTORIA KA: 20% ASTORIA ALL: 5% STATEWIDE KA: 22%	✓	-	✓
CRASHES INVOLVING ALCOHOL ONLY	ASTORIA KA: 10% ASTORIA ALL: 4% STATEWIDE KA: 17%	-	-	✓
CRASHES INVOLVING MOTORCYCLES	ASTORIA KA: 15% ASTORIA ALL: 2% STATEWIDE KA: 14%	✓	✓	✓
CRASHES INVOLVING BICYCLISTS	ASTORIA KA: 2% ASTORIA ALL: 1% STATEWIDE KA: 4%	-	-	✓
CRASHES INVOLVING PEDESTRIANS	ASTORIA KA: 24% ASTORIA ALL: 4% STATEWIDE KA: 10%	✓	✓	✓
CRASHES INVOLVING DISTRACTED DRIVERS	ASTORIA KA: 5% ASTORIA ALL: 2% STATEWIDE KA: 9%	-	-	✓

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
CRASHES INVOLVING YOUNG DRIVER (15-21)	ASTORIA KA: 7% ASTORIA ALL: 7% STATEWIDE KA: 14%	-	-	-
CRASHES INVOLVING AGING DRIVER (65+)	ASTORIA KA: 32% ASTORIA ALL: 14% STATEWIDE KA: 22%	✓	✓	✓
CRASHES IN WORK ZONES	ASTORIA KA: 0% ASTORIA ALL: 1% STATEWIDE KA: 1%	-	-	-
CRASHES INVOLVING SCHOOL BUS OR SCHOOL ZONE	ASTORIA KA: 0.0% ASTORIA ALL: 0.5% STATEWIDE KA: 1%	-	-	-

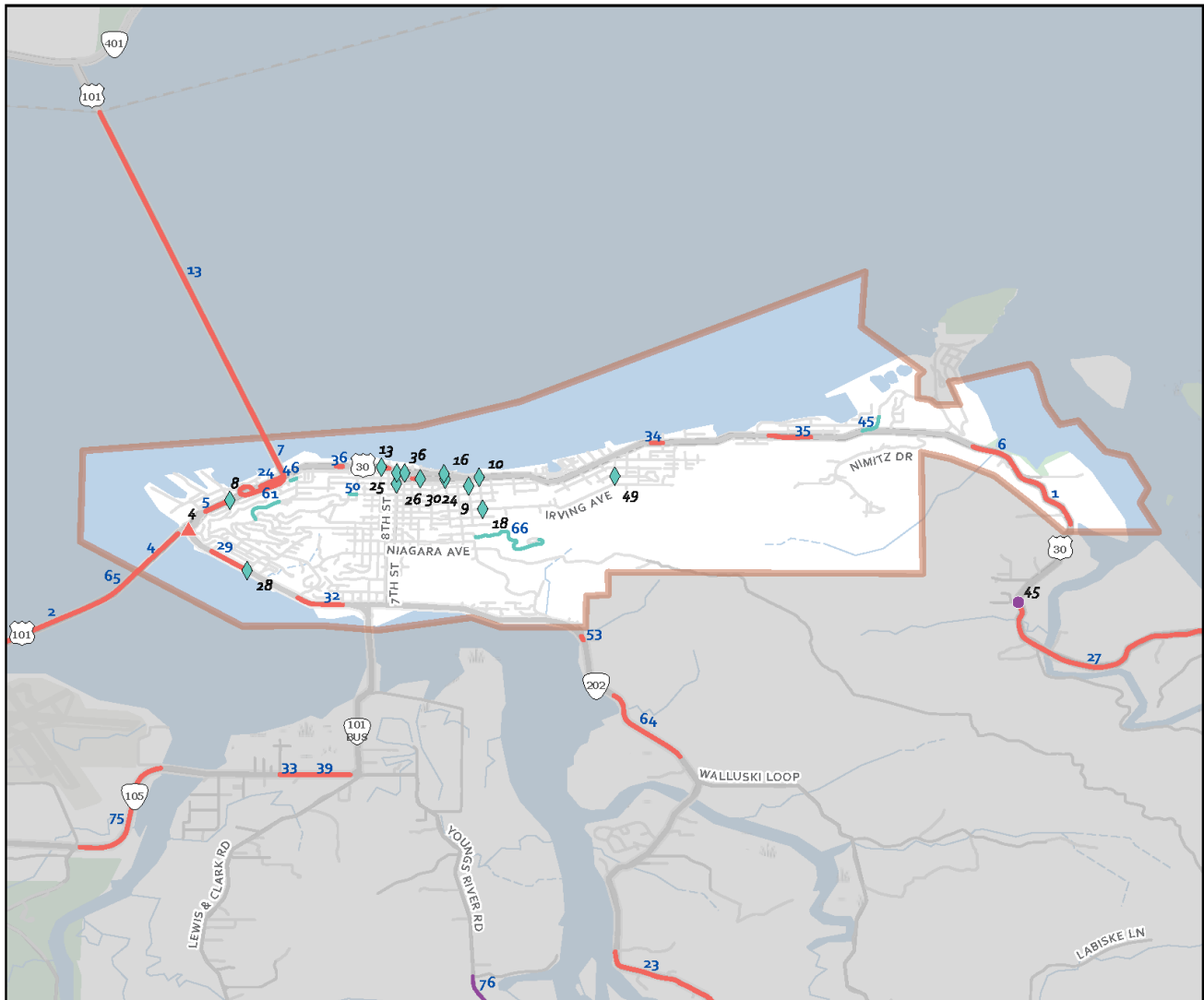
Yellow = two flags met; Red = all three flags met

Top emphasis areas with respect to City of Astoria are:

- Roadway and Lane Departure
- Risky Behaviors (Drug and Alcohol Impairment, Distracted Driving, and Speeding)
- Intersections
- Aging Drivers (65+ years of age)
- Pedestrian
- Nighttime
- Motorcyclist

HIGH INJURY NETWORK

The figure below shows the location of the County-wide High Injury Network (HIN) relative to the local area boundary.



High Injury Network (HIN) Segments & Intersections

- State Highway
- County Road
- City Street
- Private Street

- ▲ State Intersection
- County Intersection
- ◆ City Intersection
- + Private Intersection

Astoria Boundary

Reference number corresponds with HIN Segments Table

Reference number corresponds with HIN Intersections Table



FIGURE 16. COUNTY HIGH INJURY NETWORK IN THE CITY OF ASTORIA

SUMMARY OF CRASHES

From 2019 to 2023, there were 501 crashes in the City of Warrenton, 26 of which resulted in fatal or serious injuries. Countywide, this represents 15.6% of all crashes and 11.0% of all KA crashes, respectively.

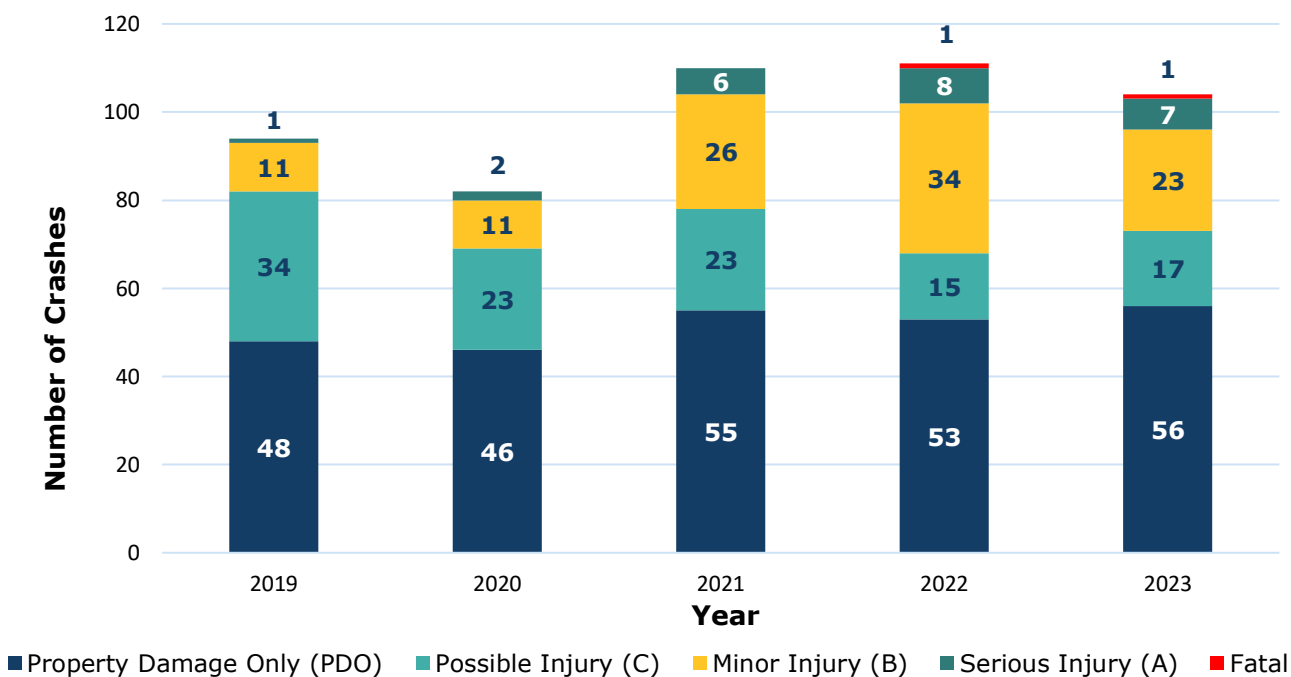


FIGURE 17. CITY OF WARRENTON CRASH SEVERITY BY YEAR (2019 TO 2023)

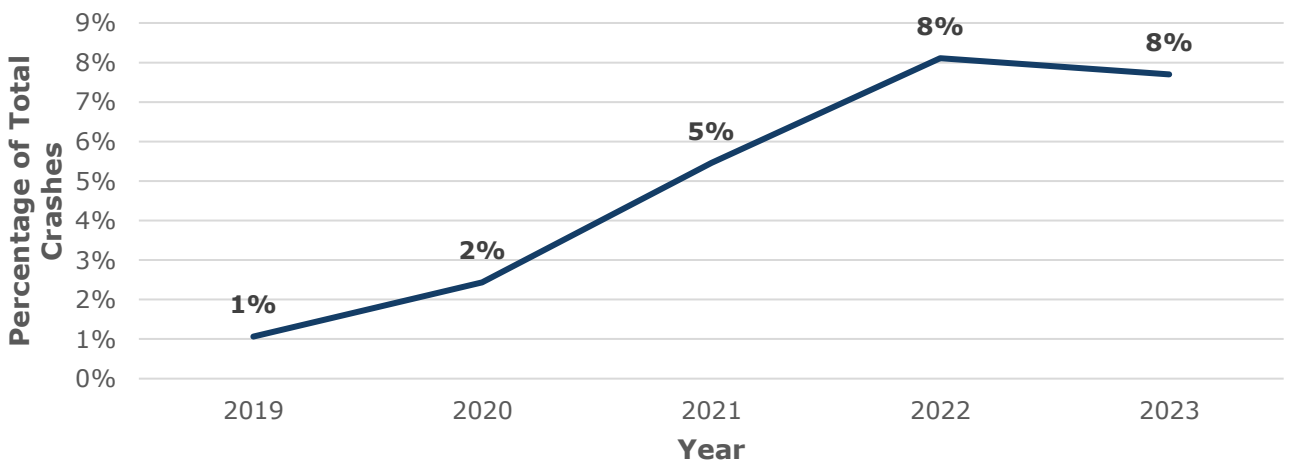


FIGURE 18. PROPORTION OF FATAL AND SERIOUS INJURY CRASHES IN THE CITY OF WARRENTON BY YEAR (2019-2023)

LOCAL CRASH TRENDS

Crash Types

Figure 19 shows the most frequent crash types and the crash types that are serious injury and fatal crashes (KA). Crash types that occurred 2% of the time or less are not shown in the figure.

Rear-end, turning, and fixed object crashes made up the largest proportion of all crashes in the City of Warrenton. KA crashes were most often classified as rear-end, fixed-object, or pedestrian crashes. There were nine pedestrian crashes and six bicycle crashes, resulting in a total of five serious injury and fatal crashes.

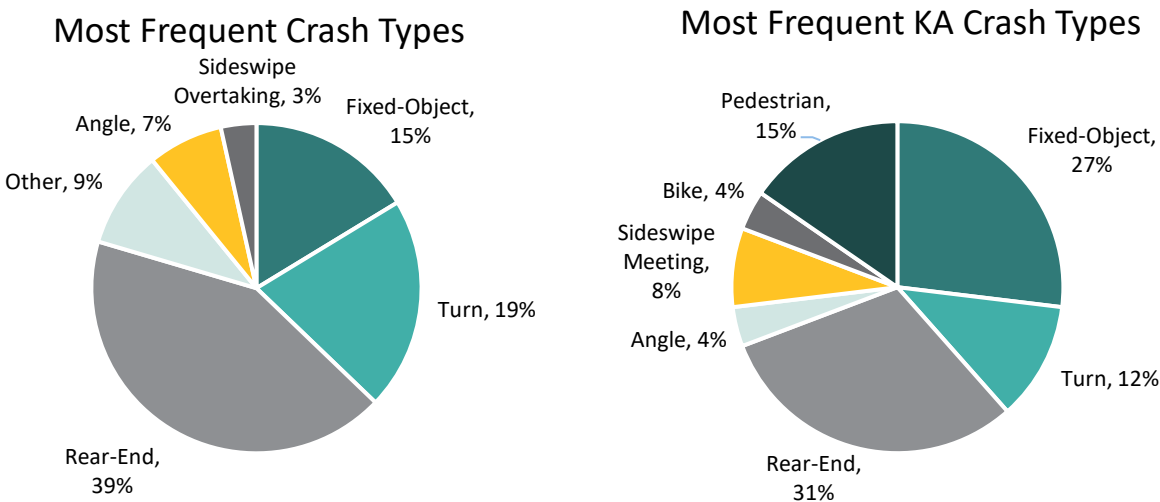


FIGURE 19. COMMON CRASH TYPES IN CITY OF WARRENTON, TOTAL AND THOSE RESULTING IN FATAL OR SERIOUS INJURY (KA) (2019-2023)

Crash Causes

Overall, crashes were most often caused by following too closely (24%), not yielding the right-of-way (15%), and inattention (11%). KA crashes were most often caused by reckless driving (19%), not yielding the right-of-way (12%), and obstructions in the roadway (12%).

Crash Attributes

About 38% of all crashes happened at an intersection, resulting in 38% of all KA crashes. Crash attributes that led to the most KA crashes include wet, icy, or snowy conditions (35%), crashes involving older drivers (35%), the vehicle leaving the roadway (31%), and dark lighting conditions (19%). Combined, alcohol and drugs made up 27% of KA crashes.

EMPHASIS AREAS

Table 9 shows the relationship between various crash attributes and statewide averages, all local crashes, and local crashes involving fatalities or serious injuries (KA crashes). Attributes that meet at least two flag criteria are highlighted in yellow, and those meeting all three are shown in red. (The flag criteria are explained in detail before Table 5.) These flagged attributes point to key

safety issues in the region and should help inform the selection of emphasis areas. In general, the more flags an attribute has, the more significant its potential impact on roadway safety.

TABLE 9. CITY OF WARRENTON CRASH ATTRIBUTE AND FLAGS MET

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
ROADWAY OR LANE DEPARTURE CRASHES	WARRENTON KA: 31% WARRENTON ALL: 16% STATEWIDE KA: 41%	✓	-	✓
INTERSECTION CRASHES	WARRENTON KA: 38% WARRENTON ALL: 38% STATEWIDE KA: 36%	✓	✓	✓
NIGHTTIME (DARK/DAWN/DUSK) CRASHES	WARRENTON KA: 19% WARRENTON ALL: 21% STATEWIDE KA: 25%	✓	-	-
SPEED-RELATED CRASHES	WARRENTON KA: 15% WARRENTON ALL: 8% STATEWIDE KA: 24%	✓	-	✓
CRASHES INVOLVING ALCOHOL AND/OR DRUGS	WARRENTON KA: 27% WARRENTON ALL: 9% STATEWIDE KA: 22%	✓	✓	✓
CRASHES INVOLVING ALCOHOL ONLY	WARRENTON KA: 19% WARRENTON ALL: 7% STATEWIDE KA: 17%	✓	✓	✓
CRASHES INVOLVING MOTORCYCLES	WARRENTON KA: 4% WARRENTON ALL: 1% STATEWIDE KA: 14%	-	-	✓
CRASHES INVOLVING BICYCLISTS	WARRENTON KA: 4% WARRENTON ALL: 1% STATEWIDE KA: 4%	-	✓	✓
CRASHES INVOLVING PEDESTRIANS	WARRENTON KA: 15% WARRENTON ALL: 2% STATEWIDE KA: 10%	✓	✓	✓
CRASHES INVOLVING DISTRACTED DRIVERS	WARRENTON KA: 4% WARRENTON ALL: 4% STATEWIDE KA: 9%	-	-	-

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
CRASHES INVOLVING YOUNG DRIVER (15-21)	WARRENTON KA: 12% WARRENTON ALL: 8% STATEWIDE KA: 14%	✓	-	✓
CRASHES INVOLVING AGING DRIVER (65+)	WARRENTON KA: 35% WARRENTON ALL: 15% STATEWIDE KA: 22%	✓	✓	✓
CRASHES IN WORK ZONES	WARRENTON KA: 0% WARRENTON ALL: 1% STATEWIDE KA: 1%	-	-	-
CRASHES INVOLVING SCHOOL BUS OR SCHOOL ZONE	WARRENTON KA: 0% WARRENTON ALL: 0.2% STATEWIDE KA: 1%	-	-	-

Yellow = two flags met; Red = all three flags met

Top emphasis areas with respect to the City of Warrenton are:

- Roadway and Lane Departure
- Risky Behaviors (Drug and Alcohol Impairment, Distracted Driving, and Speeding)
- Intersections
- Aging Drivers (65+ years of age)
- Pedestrian and Bicyclist

HIGH INJURY NETWORK

The figure below shows the location of the County-wide High Injury Network (HIN) relative to the local area boundary.

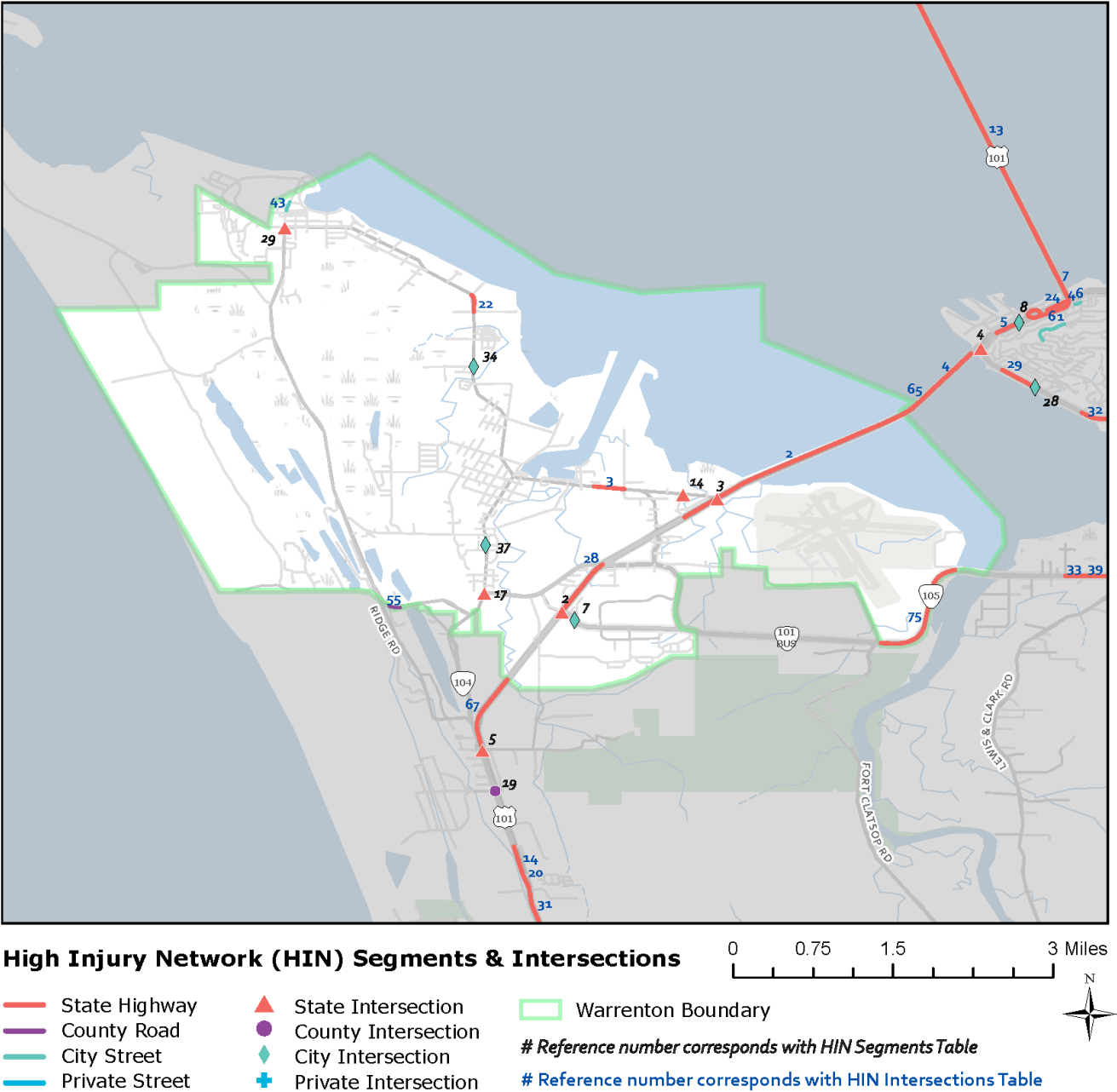


FIGURE 20. COUNTY HIGH INJURY NETWORK IN THE CITY OF WARRENTON

SUMMARY OF CRASHES

From 2019 to 2023, there were 73 crashes in the City of Gearhart, 6 of which resulted in fatal or serious injuries. Countywide, this represents 2.3% of all crashes and 2.6% of all KA crashes, respectively.

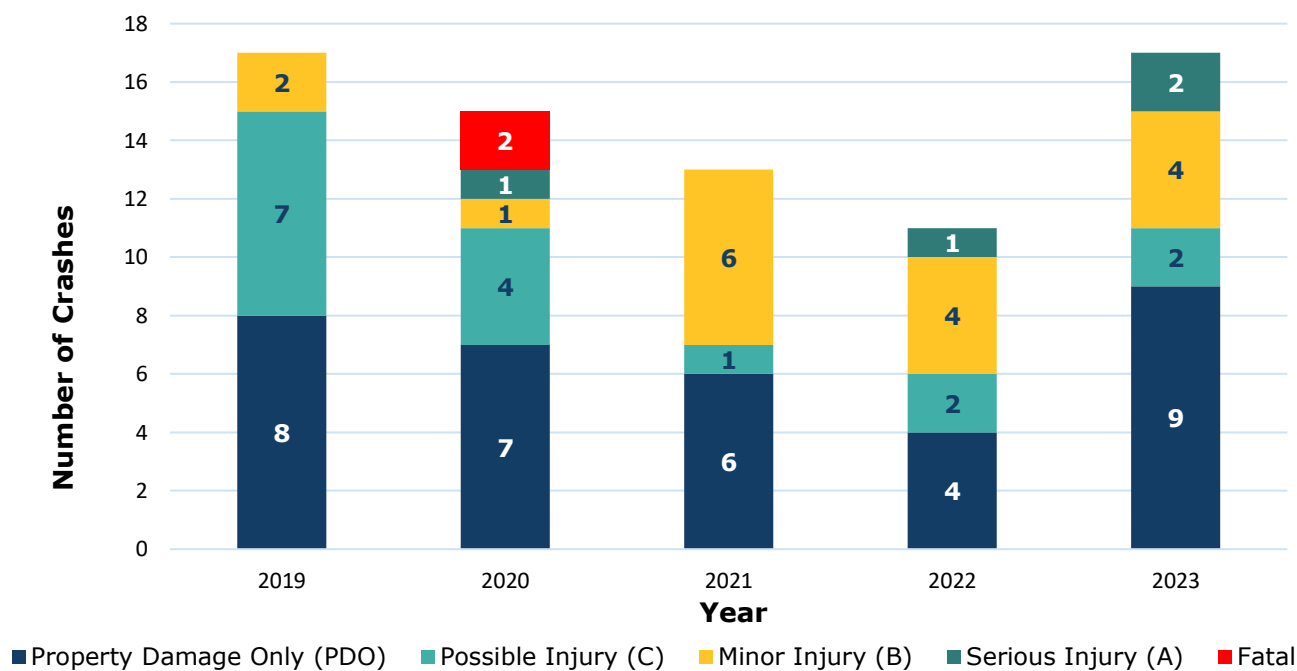


FIGURE 21. CITY OF GEARHART CRASH SEVERITY BY YEAR (2019 TO 2023)

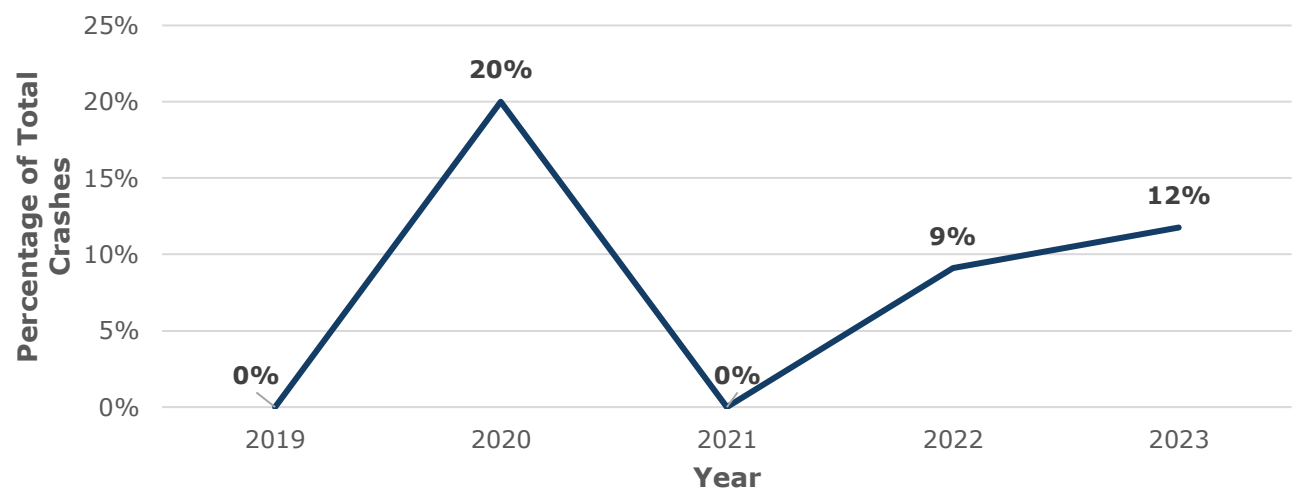


FIGURE 22. PROPORTION OF FATAL AND SERIOUS INJURY CRASHES IN THE CITY OF GEARHART BY YEAR (2019-2023)

LOCAL CRASH TRENDS

Crash Types

Figure 23 shows the most frequent crash types and the crash types that most often result in serious injury or fatality (KA). Crash types that occurred 2% of the time or less are not shown in the figure.

The most commonly occurring crash types in Gearhart are turning vehicles, rear-end collisions, and fixed-object crashes. Crashes involving a pedestrian made up 4% of the total crashes in the City of Gearhart but accounted for 50% of crashes resulting in serious injury or fatality. There was one recorded crash involving a bicycle, which accounted for less than 2% of all crashes and resulted in 17% of all fatal and serious injuries.

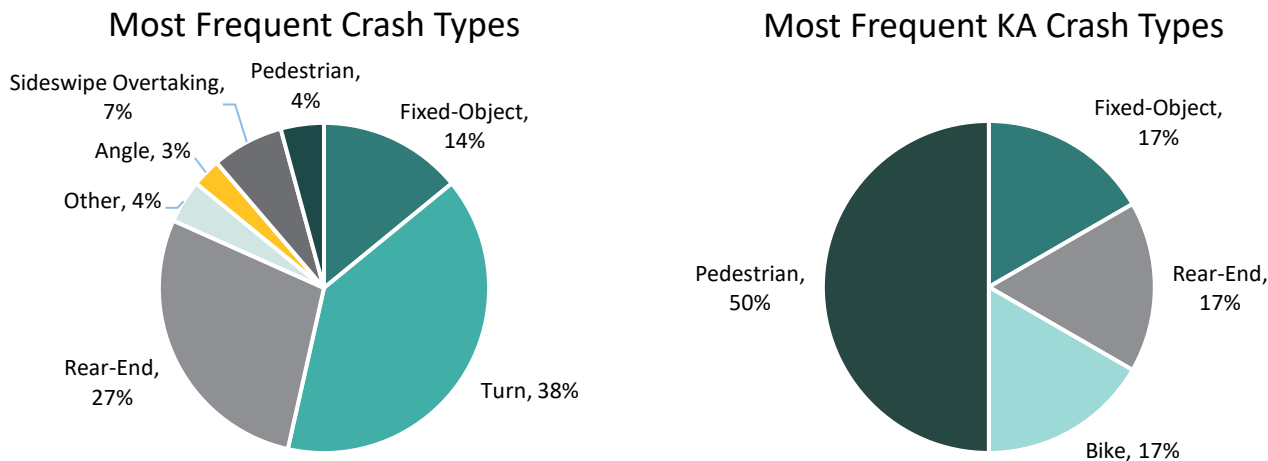


FIGURE 23. COMMON CRASH TYPES IN GEARHART, TOTAL AND THOSE RESULTING IN FATAL OR SERIOUS INJURY (KA) (2019-2023)

Crash Causes

Crashes were most frequently caused by failing to yield the right-of-way (29%), distraction (13%), and driving too fast for conditions (but not exceeding the speed limit) (10%). Fatal and serious injury crashes were most often caused by failing to yield the right-of-way (50%), not paying attention (17%), fatigue (17%), and obstructions in the roadway (17%).

Crash Attributes

Two-thirds of KA crashes involved alcohol or drugs (66%). Poor lighting conditions (dark/dusk/dawn) were a factor in 29% of all local crashes, and 33% of local KA crashes. About one-third (33%) of all crashes were intersection-related, resulting in 50% of all KA crashes.

EMPHASIS AREAS

Table 10 shows the relationship between various crash attributes and statewide averages, all local crashes, and local crashes involving fatalities or serious injuries (KA crashes). Attributes that meet

at least two flag criteria are highlighted in yellow, and those meeting all three are shown in red. (The flag criteria are explained in detail before Table 5.) These flagged attributes point to key safety issues in the region and should help inform the selection of emphasis areas. In general, the more flags an attribute has, the more significant its potential impact on roadway safety.

TABLE 10. CITY OF GEARHART CRASH ATTRIBUTE AND FLAGS MET

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
ROADWAY OR LANE DEPARTURE CRASHES	GEARHART KA: 0% GEARHART ALL: 15% STATEWIDE KA: 41%	-	-	-
INTERSECTION CRASHES	GEARHART KA: 50% GEARHART ALL: 33% STATEWIDE KA: 36%	✓	✓	✓
NIGHTTIME (DARK/DAWN/DUSK) CRASHES	GEARHART KA: 33% GEARHART ALL: 29% STATEWIDE KA: 25%	✓	✓	✓
SPEED-RELATED CRASHES	GEARHART KA: 17% GEARHART ALL: 19% STATEWIDE KA: 24%	✓	-	-
CRASHES INVOLVING ALCOHOL AND/OR DRUGS	GEARHART KA: 100% GEARHART ALL: 15% STATEWIDE KA: 22%	✓	✓	✓
CRASHES INVOLVING ALCOHOL ONLY	GEARHART KA: 50% GEARHART ALL: 11% STATEWIDE KA: 17%	✓	✓	✓
CRASHES INVOLVING MOTORCYCLES	GEARHART KA: 17% GEARHART ALL: 1% STATEWIDE KA: 14%	✓	✓	✓
CRASHES INVOLVING BICYCLISTS	GEARHART KA: 17% GEARHART ALL: 1% STATEWIDE KA: 4%	✓	✓	✓
CRASHES INVOLVING PEDESTRIANS	GEARHART KA: 50% GEARHART ALL: 4% STATEWIDE KA: 10%	✓	✓	✓

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
CRASHES INVOLVING DISTRACTED DRIVERS	GEARHART KA: 0% GEARHART ALL: 12% STATEWIDE KA: 9%	-	-	-
CRASHES INVOLVING YOUNG DRIVER (15-21)	GEARHART KA: 33% GEARHART ALL: 11% STATEWIDE KA: 14%	✓	✓	✓
CRASHES INVOLVING AGING DRIVER (65+)	GEARHART KA: 17% GEARHART ALL: 18% STATEWIDE KA: 22%	✓	-	
CRASHES IN WORK ZONES	GEARHART KA: 0% GEARHART ALL: 0% STATEWIDE KA: 1%	-	-	-
CRASHES INVOLVING SCHOOL BUS OR SCHOOL ZONE	GEARHART KA: 0% GEARHART ALL: 0% STATEWIDE KA: 1%	-	-	-

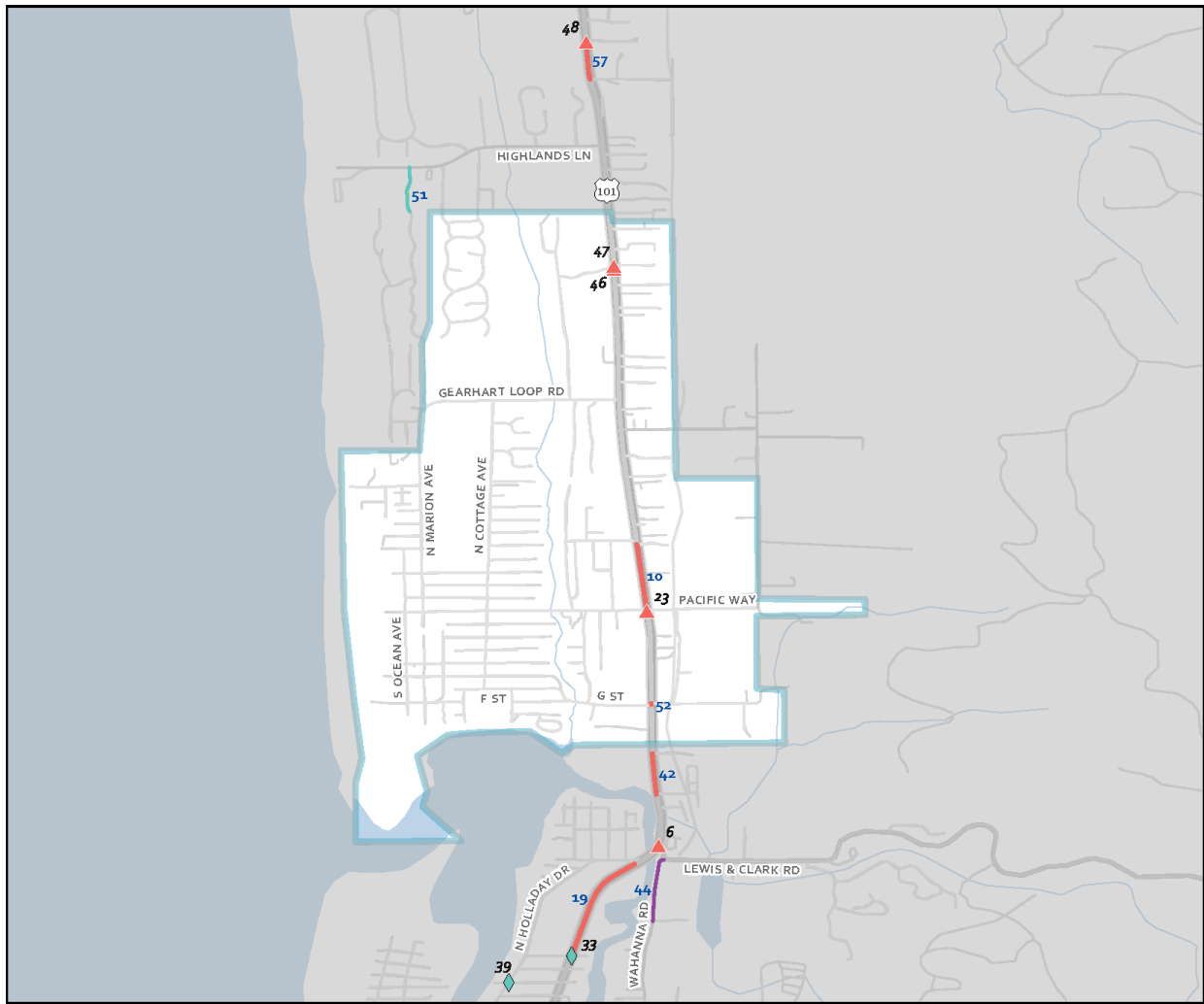
Yellow = two flags met; Red = all three flags met

Top emphasis areas with respect to the City of Gearhart are:

- Intersection
- Nighttime
- Risky Behaviors (Drug and Alcohol Impairment, Distracted Driving, and Speeding)
- Intersections
- Young Drivers
- Pedestrian and Bicyclist

HIGH INJURY NETWORK

The figure below shows the location of the County-wide High Injury Network (HIN) relative to the local area boundary.



High Injury Network (HIN) Segments & Intersections

- State Highway
- County Road
- City Street
- Private Street

- ▲ State Intersection
- County Intersection
- ◆ City Intersection
- + Private Intersection

 Gearhart Boundary

Reference number corresponds with HIN Segments Table

Reference number corresponds with HIN Intersections Table

0 0.25 0.5 1 Miles



FIGURE 24. COUNTY HIGH INJURY NETWORK IN THE CITY OF GEARHART

SUMMARY OF CRASHES

From 2019 to 2023, there were 408 crashes in the City of Seaside, 23 of which resulted in fatal or serious injuries. Countywide, this represents 12.7% of all crashes and 9.9% of all KA crashes, respectively.

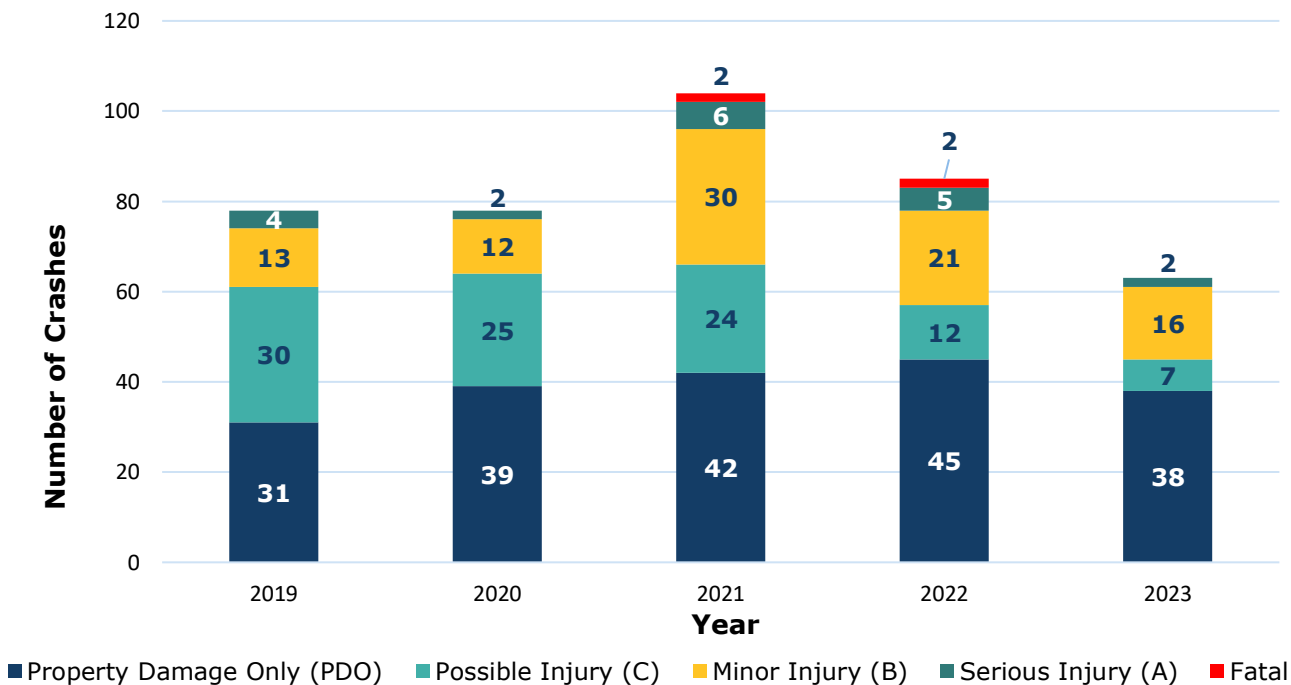


FIGURE 25. CITY OF SEASIDE CRASH SEVERITY BY YEAR (2019 TO 2023)

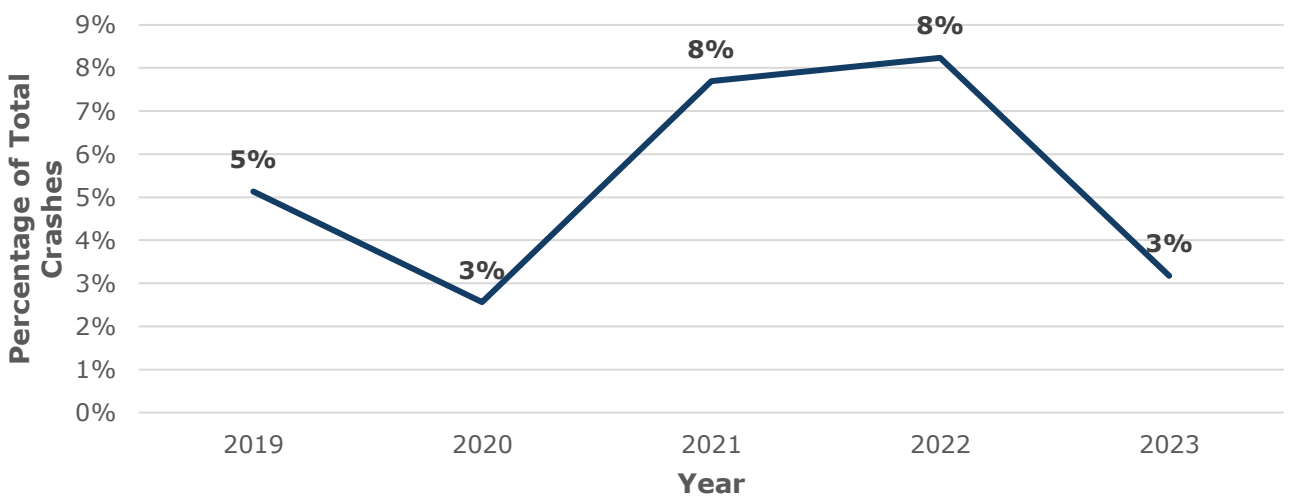


FIGURE 26. PROPORTION OF FATAL AND SERIOUS INJURY CRASHES IN THE CITY OF SEASIDE BY YEAR (2019-2023)

LOCAL CRASH TRENDS

Crash Types

Figure 27 shows the most frequent crash types and the crash types that most often result in serious injury or fatality (KA). Crash types that occurred 2% of the time or less are not shown in the figure.

The most commonly occurring crash types in the City of Seaside are rear-end collisions, turning vehicles, and fixed-object crashes. Turning crash types and crashes involving a pedestrian made up the highest proportion of KA crashes, followed by those with a fixed object and bike. Crashes involving a bicycle or pedestrian made up 8% of the total crashes, but accounted for 39% of all KA crashes.

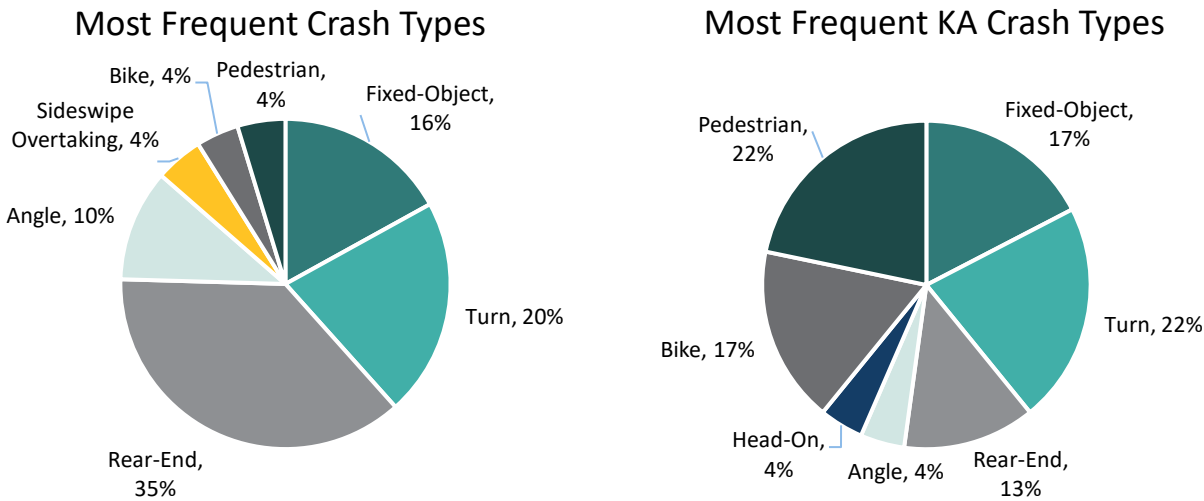


FIGURE 27. COMMON CRASH TYPES IN THE CITY OF SEASIDE, TOTAL AND THOSE RESULTING IN FATAL AND SERIOUS INJURY (KA) (2019-2023)

Crash Causes

Crashes were most frequently caused by failing to yield the right-of-way (19%), following too closely (14%), failing to avoid the vehicle ahead (9%), and distraction (9%). KA crashes were most frequently caused by not yielding the right-of-way (32%), distraction (14%), driving too fast for conditions (14%), and crossing the center line of a two-way road (14%).

Crash Attributes

Nearly half of all crashes were at or related to an intersection (49%), and 32% occurred on a straight segment of roadway. Many crashes occurred during rainy, snowy, or icy conditions (21%) and during dark, dawn, dusk hours (13%), accounting for 26% and 22% of all KA crashes, respectively.

EMPHASIS AREAS

Table 11 shows the relationship between various crash attributes and statewide averages, all local crashes, and local crashes involving fatalities or serious injuries (KA crashes). Attributes that meet at least two flag criteria are highlighted in yellow, and those meeting all three are shown in red. (The flag criteria are explained in detail before Table 5 **Error! Reference source not found..**) These flagged attributes point to key safety issues in the region and should help inform the selection of emphasis areas. In general, the more flags an attribute has, the more significant its potential impact on roadway safety.

TABLE 11. CITY OF SEASIDE CRASH ATTRIBUTE AND FLAGS MET

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
ROADWAY OR LANE DEPARTURE CRASHES	SEASIDE KA: 26% SEASIDE ALL: 20% STATEWIDE KA: 41%	✓		✓
INTERSECTION CRASHES	SEASIDE KA: 52% SEASIDE ALL: 49% STATEWIDE KA: 36%	✓	✓	✓
NIGHTTIME (DARK/DAWN/DUSK) CRASHES	SEASIDE KA: 22% SEASIDE ALL: 13% STATEWIDE KA: 25%	✓		✓
SPEED-RELATED CRASHES	SEASIDE KA: 13% SEASIDE ALL: 10% STATEWIDE KA: 24%	✓		✓
CRASHES INVOLVING ALCOHOL AND/OR DRUGS	SEASIDE KA: 30% SEASIDE ALL: 12% STATEWIDE KA: 22%	✓	✓	✓
CRASHES INVOLVING ALCOHOL ONLY	SEASIDE KA: 22% SEASIDE ALL: 10% STATEWIDE KA: 17%	✓	✓	✓
CRASHES INVOLVING MOTORCYCLES	SEASIDE KA: 9% SEASIDE ALL: 1% STATEWIDE KA: 14%			✓
CRASHES INVOLVING BICYCLISTS	SEASIDE KA: 17% SEASIDE ALL: 4% STATEWIDE KA: 4%	✓	✓	✓

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
CRASHES INVOLVING PEDESTRIANS	SEASIDE KA: 22%			
	SEASIDE ALL: 5%	✓	✓	✓
	STATEWIDE KA: 10%			
CRASHES INVOLVING DISTRACTED DRIVERS	SEASIDE KA: 13%			
	SEASIDE ALL: 9%	✓	✓	✓
	STATEWIDE KA: 9%			
CRASHES INVOLVING YOUNG DRIVER (15-21)	SEASIDE KA: 9%			
	SEASIDE ALL: 6%			✓
	STATEWIDE KA: 14%			
CRASHES INVOLVING AGING DRIVER (65+)	SEASIDE KA: 35%			
	SEASIDE ALL: 14%	✓	✓	✓
	STATEWIDE KA: 22%			
CRASHES IN WORK ZONES	SEASIDE KA: 0%			
	SEASIDE ALL: 1%			
	STATEWIDE KA: 1%			
CRASHES INVOLVING SCHOOL BUS OR SCHOOL ZONE	SEASIDE KA: 0%			
	SEASIDE ALL: 1%			
	STATEWIDE KA: 1%			

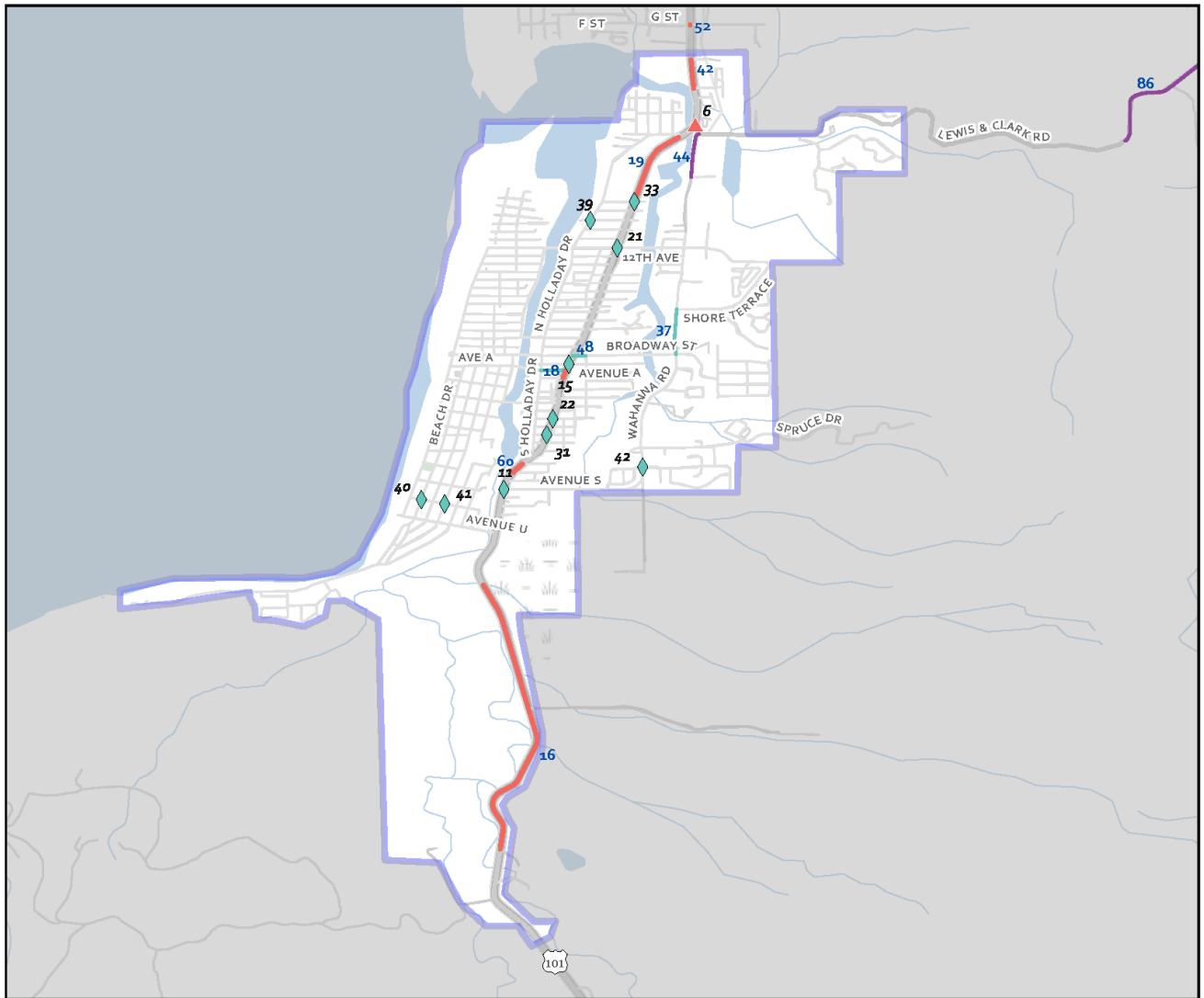
Yellow = two flags met; Red = all three flags met

Top emphasis areas with respect to the City of Seaside are:

- Road and Lane Departure
- Intersection
- Nighttime
- Risky Behaviors (Drug and Alcohol Impairment, Distracted Driving, and Speeding)
- Aging Drivers (65+ years of age)
- Pedestrian and Bicyclist

HIGH INJURY NETWORK

The figure below shows the location of the County-wide High Injury Network (HIN) relative to the local area boundary.



High Injury Network (HIN) Segments & Intersections

0 0.5 1 2 Miles

- State Highway
- County Road
- City Street
- Private Street

- State Intersection
- County Intersection
- City Intersection
- Private Intersection

Seaside Boundary

Reference number corresponds with HIN Segments Table

Reference number corresponds with HIN Intersections Table



FIGURE 28. COUNTY HIGH INJURY NETWORK IN SEASIDE

SUMMARY OF CRASHES

From 2019 to 2023, there were 52 crashes in the City of Cannon Beach, 3 of which resulted in fatal or serious injuries. Countywide, this represents 1.6% of all crashes and 1.3% of all KA crashes, respectively.

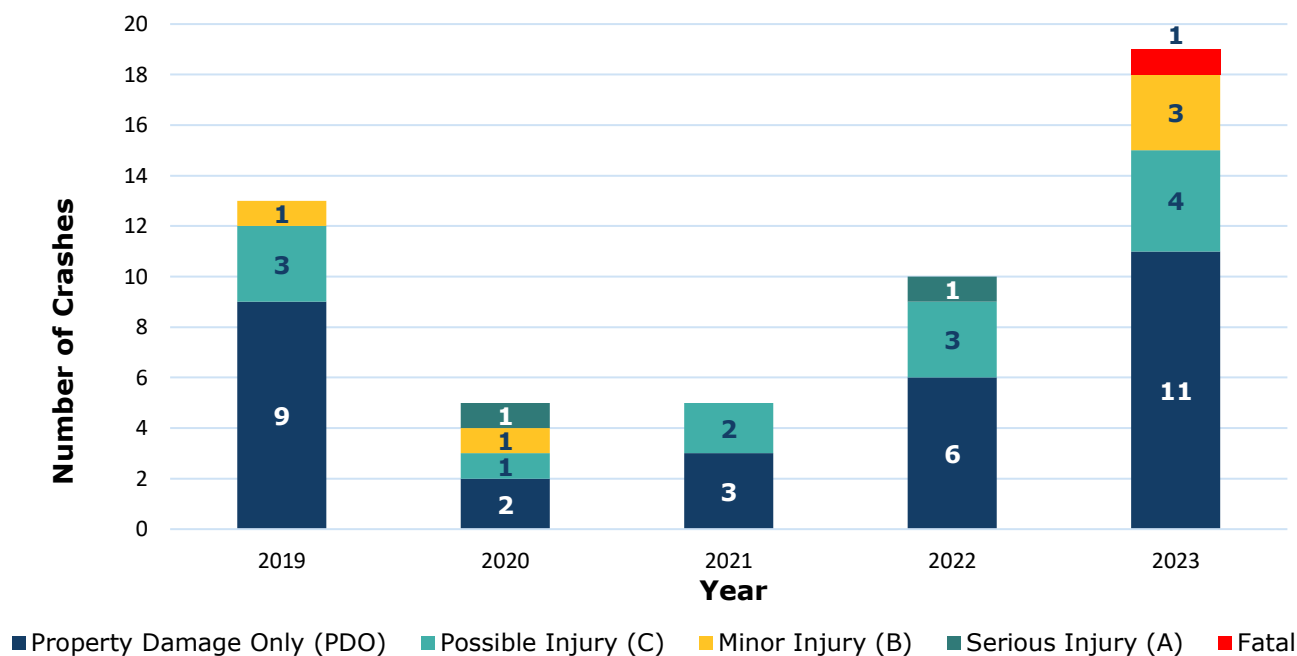


FIGURE 29. CITY OF CANNON BEACH CRASH SEVERITY BY YEAR (2019 TO 2023)

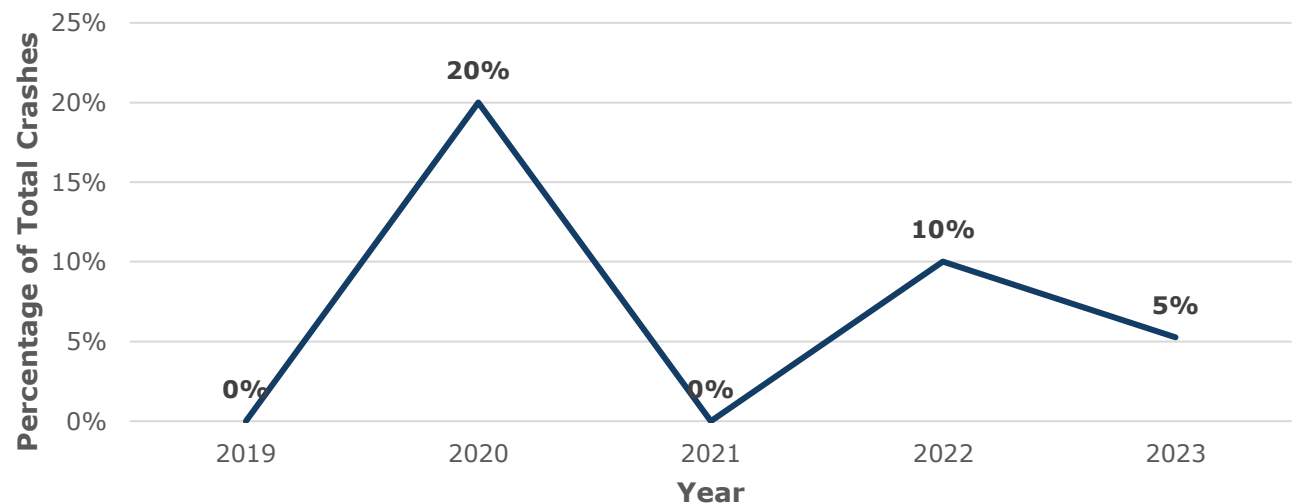


FIGURE 30. PROPORTION OF FATAL AND SERIOUS INJURY CRASHES IN THE CITY OF CANNON BEACH BY YEAR (2019-2023)

LOCAL CRASH TRENDS

Crash Types

The most common crash types in the City of Cannon Beach were fixed-object, turning, and rear-end (Figure 31). There were three KA crashes in this time period. One crash was caused by failure to yield, and resulted in a pedestrian fatality. Another crash was caused by an improper turn and resulted in a serious injury. The third crash involved a drunk driver who departed the roadway and hit a fixed object, resulting in serious injury.

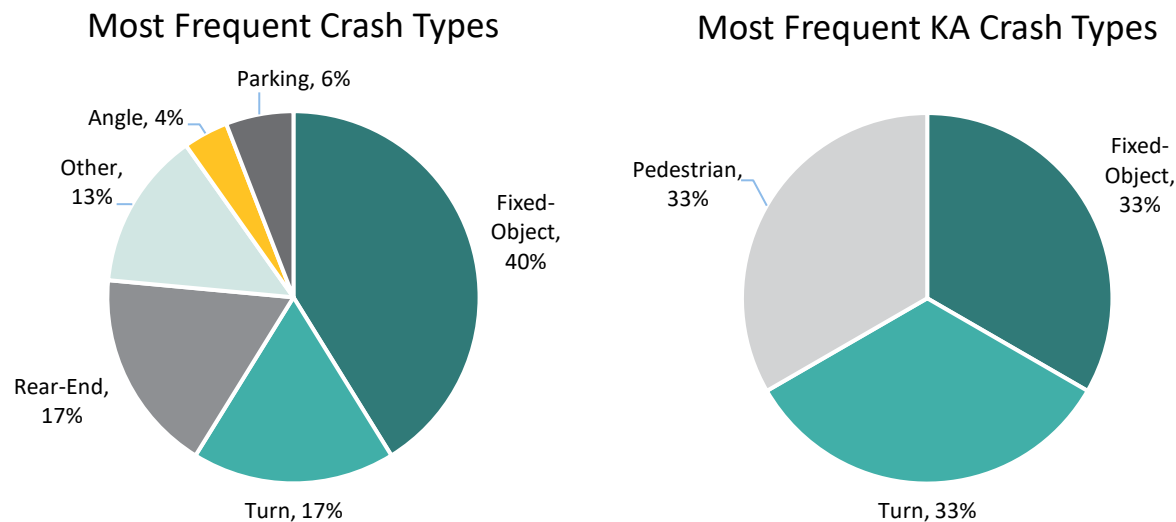


FIGURE 31. COMMON CRASH TYPES IN THE CITY OF CANNON BEACH, TOTAL AND THOSE RESULTING IN FATAL OR SERIOUS INJURY (KA) (2019-2023)

Crash Causes

Overall, crashes were most frequently caused by not yielding (15%), driving too fast for conditions (but not exceeding the speed limit) (15%), and other (not improper driving) (13%).

Crash Attributes

Although they did not all result in KA crashes, the most frequently occurring crash attributes in Cannon Beach include the vehicle leaving the roadway (33%), at an intersection or are intersection-related (31%), crashes during wet, icy, or snowy conditions (29%), during dark, dusk, or dawn (25%), and speed related crashes (17%). Crashes involving older drivers made up 6% of all crashes, but 33% of KA crashes.

EMPHASIS AREAS

Table 12 shows the relationship between various crash attributes and statewide averages, all local crashes, and local crashes involving fatalities or serious injuries (KA crashes). Attributes that meet at least two flag criteria are highlighted in yellow, and those meeting all three are shown in red. (The flag criteria are explained in detail before Table 5**Error! Reference source not found.**)

These flagged attributes point to key safety issues in the region and should help inform the selection of emphasis areas. In general, the more flags an attribute has, the more significant its potential impact on roadway safety.

It should be noted that the proportion of KA crashes in the City of Cannon Beach is impacted by the very low number of KA crashes (3) between 2019 and 2023.

TABLE 12. CITY OF CANNON BEACH CRASH ATTRIBUTE AND FLAGS MET

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
ROADWAY OR LANE DEPARTURE CRASHES	CANNON BEACH KA: 33% CANNON BEACH ALL: 33% STATEWIDE KA: 41%	✓	-	✓
INTERSECTION CRASHES	CANNON BEACH KA: 67% CANNON BEACH ALL: 31% STATEWIDE KA: 36%	✓	✓	✓
NIGHTTIME (DARK/DAWN/DUSK) CRASHES	CANNON BEACH KA: 33% CANNON BEACH ALL: 25% STATEWIDE KA: 25%	✓	✓	✓
SPEED-RELATED CRASHES	CANNON BEACH KA: 0% CANNON BEACH ALL: 17% STATEWIDE KA: 24%	-	-	-
CRASHES INVOLVING ALCOHOL AND/OR DRUGS	CANNON BEACH KA: 33% CANNON BEACH ALL: 8% STATEWIDE KA: 22%	✓	✓	✓
CRASHES INVOLVING ALCOHOL ONLY	CANNON BEACH KA: 33% CANNON BEACH ALL: 6% STATEWIDE KA: 17%	✓	✓	✓
CRASHES INVOLVING MOTORCYCLES	CANNON BEACH KA: 0% CANNON BEACH ALL: 0% STATEWIDE KA: 14%	-	-	-
CRASHES INVOLVING BICYCLISTS	CANNON BEACH KA: 0% CANNON BEACH ALL: 0% STATEWIDE KA: 4%	-	-	-
CRASHES INVOLVING PEDESTRIANS	CANNON BEACH KA: 33% CANNON BEACH ALL: 2% STATEWIDE KA: 10%	✓	✓	✓

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
CRASHES INVOLVING DISTRACTED DRIVERS	CANNON BEACH KA: 0%			
	CANNON BEACH ALL: 6%	-	-	-
	STATEWIDE KA: 9%			
CRASHES INVOLVING YOUNG DRIVER (15-21)	CANNON BEACH KA: 33%			
	CANNON BEACH ALL: 8%	✓	✓	✓
	STATEWIDE KA: 14%			
CRASHES INVOLVING AGING DRIVER (65+)	CANNON BEACH KA: 33%			
	CANNON BEACH ALL: 6%	✓	✓	✓
	STATEWIDE KA: 22%			
CRASHES IN WORK ZONES	CANNON BEACH KA: 0%			
	CANNON BEACH ALL: 2%	-	-	-
	STATEWIDE KA: 1%			
CRASHES INVOLVING SCHOOL BUS OR SCHOOL ZONE	CANNON BEACH KA: 0%			
	CANNON BEACH ALL: 1%	-	-	-
	STATEWIDE KA: 1%			

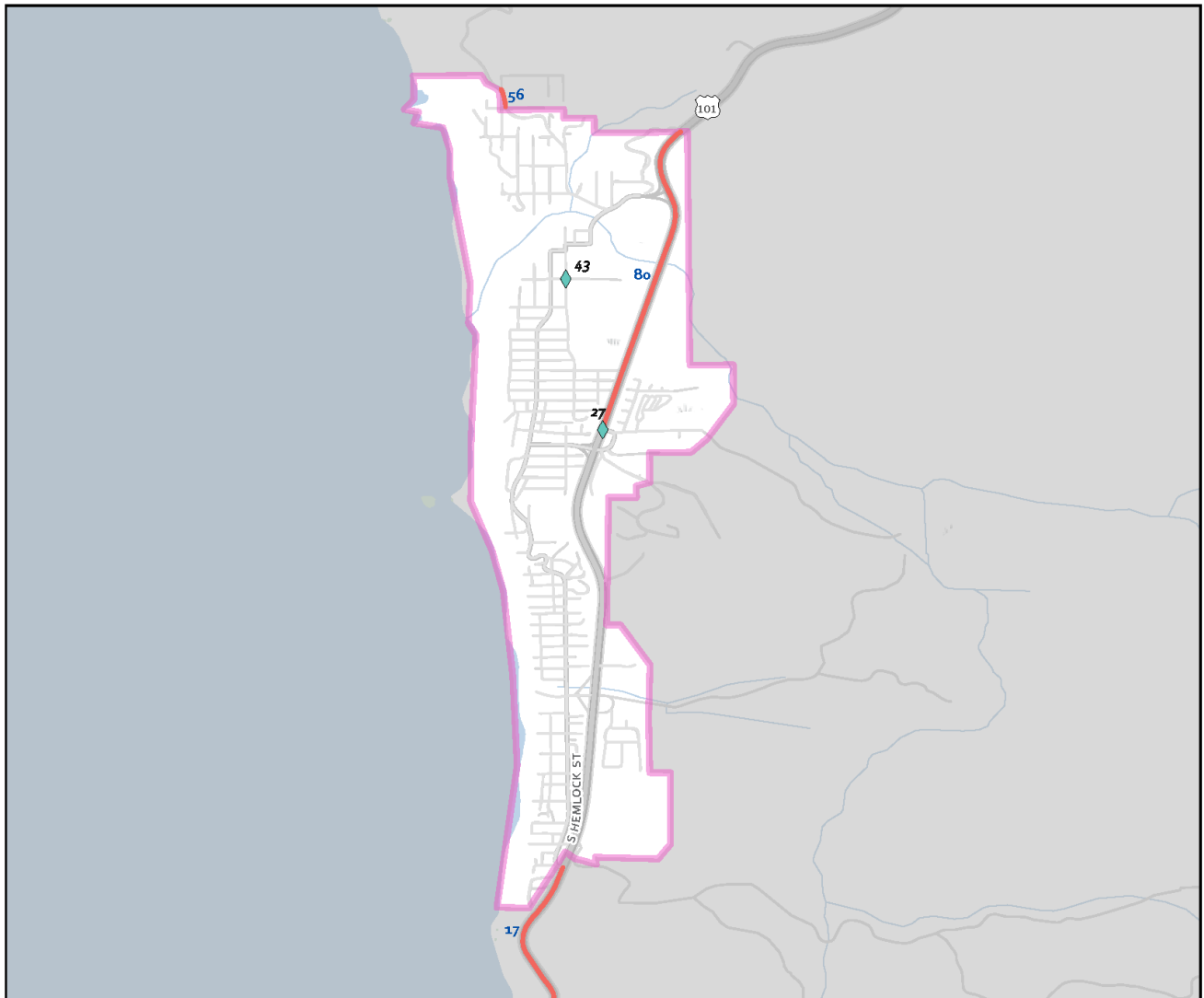
Yellow = two flags met; Red = all three flags met

Top emphasis areas with respect to the City of Cannon Beach are:

- Impaired Driving
- Intersection
- Nighttime
- Young Drivers
- Aging Drivers (65+ years of age)
- Pedestrian

HIGH INJURY NETWORK

Figure 32 shows the location of the County-wide High Injury Network (HIN) relative to the local area boundary.



High Injury Network (HIN) Segments & Intersections

0 0.25 0.5 1 Miles

- State Highway
- County Road
- City Street
- Private Street

- ▲ State Intersection
- County Intersection
- ◆ City Intersection
- + Private Intersection

Cannon Beach Boundary

Reference number corresponds with HIN Segments Table

Reference number corresponds with HIN Intersections Table



FIGURE 32. COUNTY HIGH INJURY NETWORK IN CANNON BEACH

KNAPPA/SVENSEN STUDY AREA

SUMMARY OF CRASHES

From 2019 to 2023, there were 105 crashes in Knappa and Svensen study area, including portions of US 30 and unincorporated County areas between them, 9 of which resulted in fatal or serious injuries. Countywide, this represents 3.3% of all crashes and 3.8% of all KA crashes, respectively.

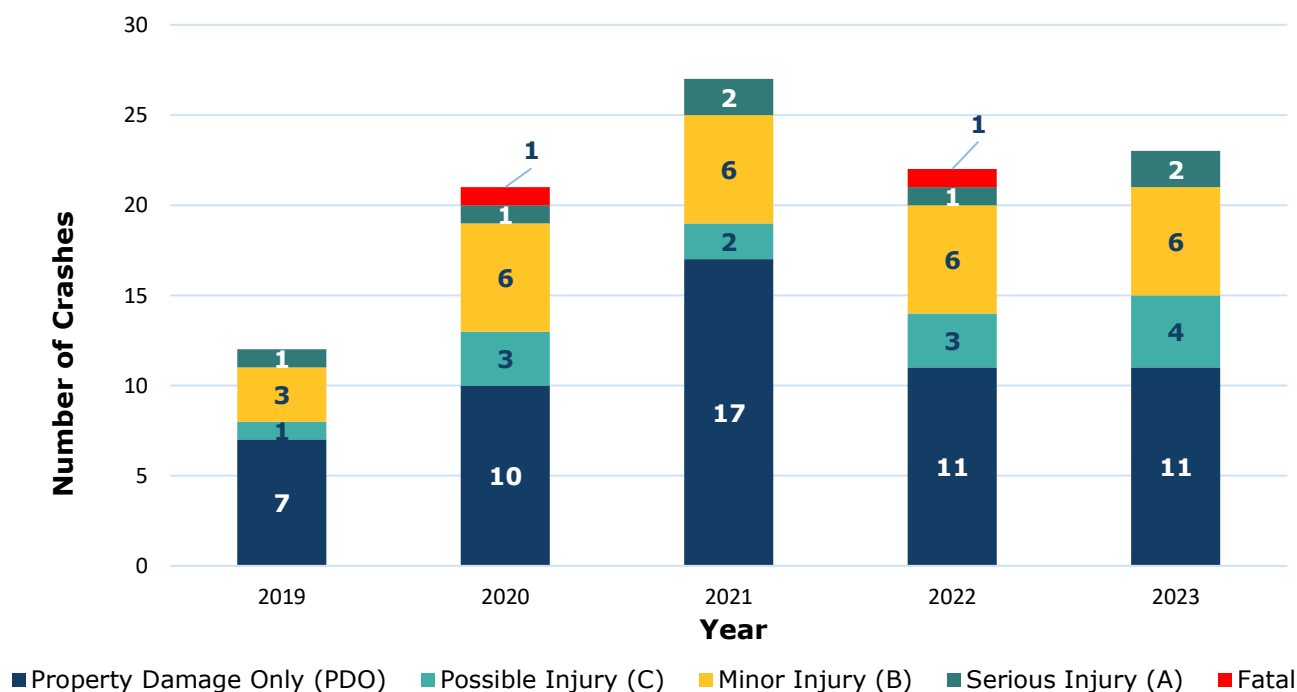


FIGURE 33. KNAPPA/SVENSEN STUDY AREA CRASH SEVERITY BY YEAR (2019 TO 2023)

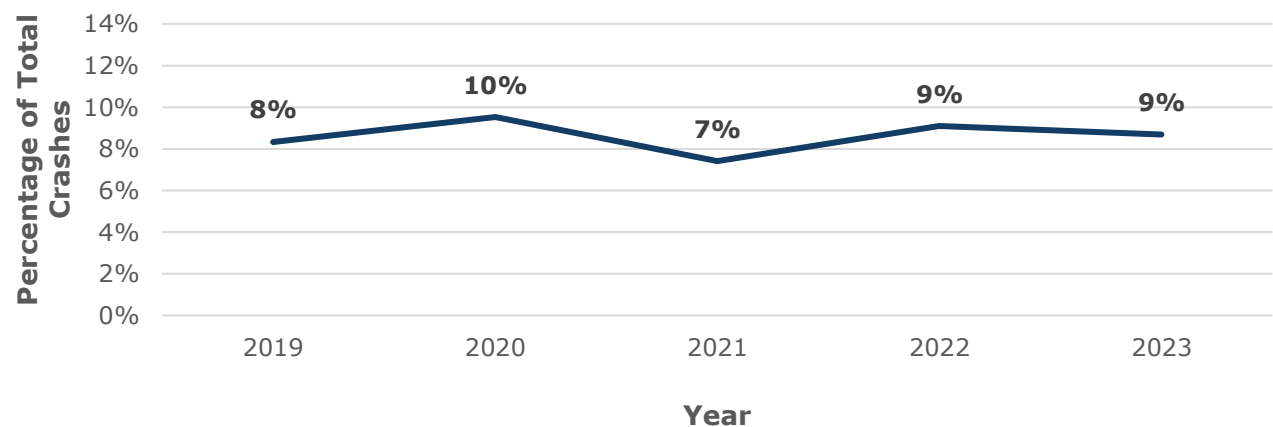


FIGURE 34. PROPORTION OF FATAL AND SERIOUS INJURY CRASHES IN KNAPPA/SVENSEN STUDY AREA BY YEAR (2019-2023)

LOCAL CRASH TRENDS

Crash Types

Figure 35 shows the most frequent crash types and the crash types that most often result in serious injury or fatality (KA). Crash types that occurred 2% of the time or less are not shown in either figure.

Most crashes in the Knappa/Svensen study area were classified as fixed-object and rear-end crashes. The category of “other” often refers to self-reported incidents such as not following regulatory signs, vehicle stalling, or driving a defective vehicle. Crash types that most commonly resulted in serious injury or fatality were fixed-object and angle crashes. There was one crash involving a pedestrian, which resulted in fatality. This crash occurred at night and involved an alcohol-impaired driver. There were no crashes with people on bicycles.

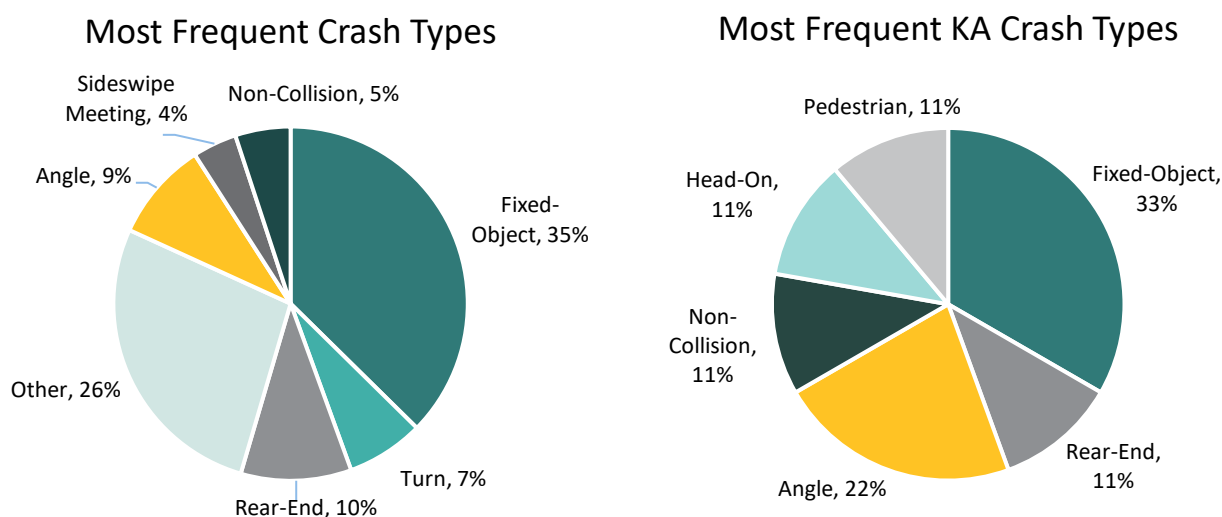


FIGURE 35. COMMON CRASH TYPES IN KNAPPA/SVENSEN STUDY AREA, TOTAL AND THOSE RESULTING IN FATAL OR SERIOUS INJURY (KA) (2019-2023)

Crash Causes & Attributes

About 12% of crashes involved an alcohol- or drug-impaired driver, leading to 44% of all KA crashes. Crashes at intersections comprised 23% of all crashes and 44% of KA crashes. There were four crashes involving a motorcycle, one of which resulted in a serious injury (11% of KA crashes). Crashes involving older drivers occurred 18% of the time, and resulted in 33% of KA crashes.

EMPHASIS AREAS

Table 13 shows the relationship between various crash attributes and statewide averages, all local crashes, and local crashes involving fatalities or serious injuries (KA crashes). Attributes that meet at least two flag criteria are highlighted in yellow, and those meeting all three are shown in red. (The flag criteria are explained in detail before Table 5.) These flagged attributes point to key safety issues in the region and should help inform the selection of emphasis areas. In general, the more flags an attribute has, the more significant its potential impact on roadway safety.

TABLE 13. KNAPPA/SVENSEN STUDY AREA CRASH ATTRIBUTE AND FLAGS MET

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
ROADWAY OR LANE DEPARTURE CRASHES	KNAPPA/SVENSEN KA: 33% KNAPPA/SVENSEN ALL: 37% STATEWIDE KA: 41%	✓	-	-
INTERSECTION CRASHES	KNAPPA/SVENSEN KA: 44% KNAPPA/SVENSEN ALL: 23% STATEWIDE KA: 36%	✓	✓	✓
NIGHTTIME (DARK/DAWN/DUSK) CRASHES	KNAPPA/SVENSEN KA: 33% KNAPPA/SVENSEN ALL: 44% STATEWIDE KA: 25%	✓	✓	-
SPEED-RELATED CRASHES	KNAPPA/SVENSEN KA: 11% KNAPPA/SVENSEN ALL: 22% STATEWIDE KA: 24%	✓	-	-
CRASHES INVOLVING ALCOHOL AND/OR DRUGS	KNAPPA/SVENSEN KA: 44% KNAPPA/SVENSEN ALL: 11% STATEWIDE KA: 22%	✓	✓	✓
CRASHES INVOLVING ALCOHOL ONLY	KNAPPA/SVENSEN KA: 22% KNAPPA/SVENSEN ALL: 9% STATEWIDE KA: 17%	✓	✓	✓
CRASHES INVOLVING MOTORCYCLES	KNAPPA/SVENSEN KA: 11% KNAPPA/SVENSEN ALL: 4% STATEWIDE KA: 14%	✓	-	✓
CRASHES INVOLVING BICYCLISTS	KNAPPA/SVENSEN KA: 0% KNAPPA/SVENSEN ALL: 0% STATEWIDE KA: 4%	-	-	-
CRASHES INVOLVING PEDESTRIANS	KNAPPA/SVENSEN KA: 11% KNAPPA/SVENSEN ALL: 1% STATEWIDE KA: 10%	✓	✓	✓
CRASHES INVOLVING DISTRACTED DRIVERS	KNAPPA/SVENSEN KA: 11% KNAPPA/SVENSEN ALL: 2% STATEWIDE KA: 9%	✓	✓	✓
CRASHES INVOLVING YOUNG DRIVER (15-21)	KNAPPA/SVENSEN KA: 22% KNAPPA/SVENSEN ALL: 9% STATEWIDE KA: 14%	✓	✓	✓

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
CRASHES INVOLVING AGING DRIVER (65+)	KNAPPA/SVENSEN KA: 33%			
	KNAPPA/SVENSEN ALL: 18%	✓	✓	✓
	STATEWIDE KA: 22%			
CRASHES IN WORK ZONES	KNAPPA/SVENSEN KA: 0%			
	KNAPPA/SVENSEN ALL: 1%	-	-	-
	STATEWIDE KA: 1%			
CRASHES INVOLVING SCHOOL BUS OR SCHOOL ZONE	KNAPPA/SVENSEN KA: 0%			
	KNAPPA/SVENSEN ALL: 0%	-	-	-
	STATEWIDE KA: 1%			

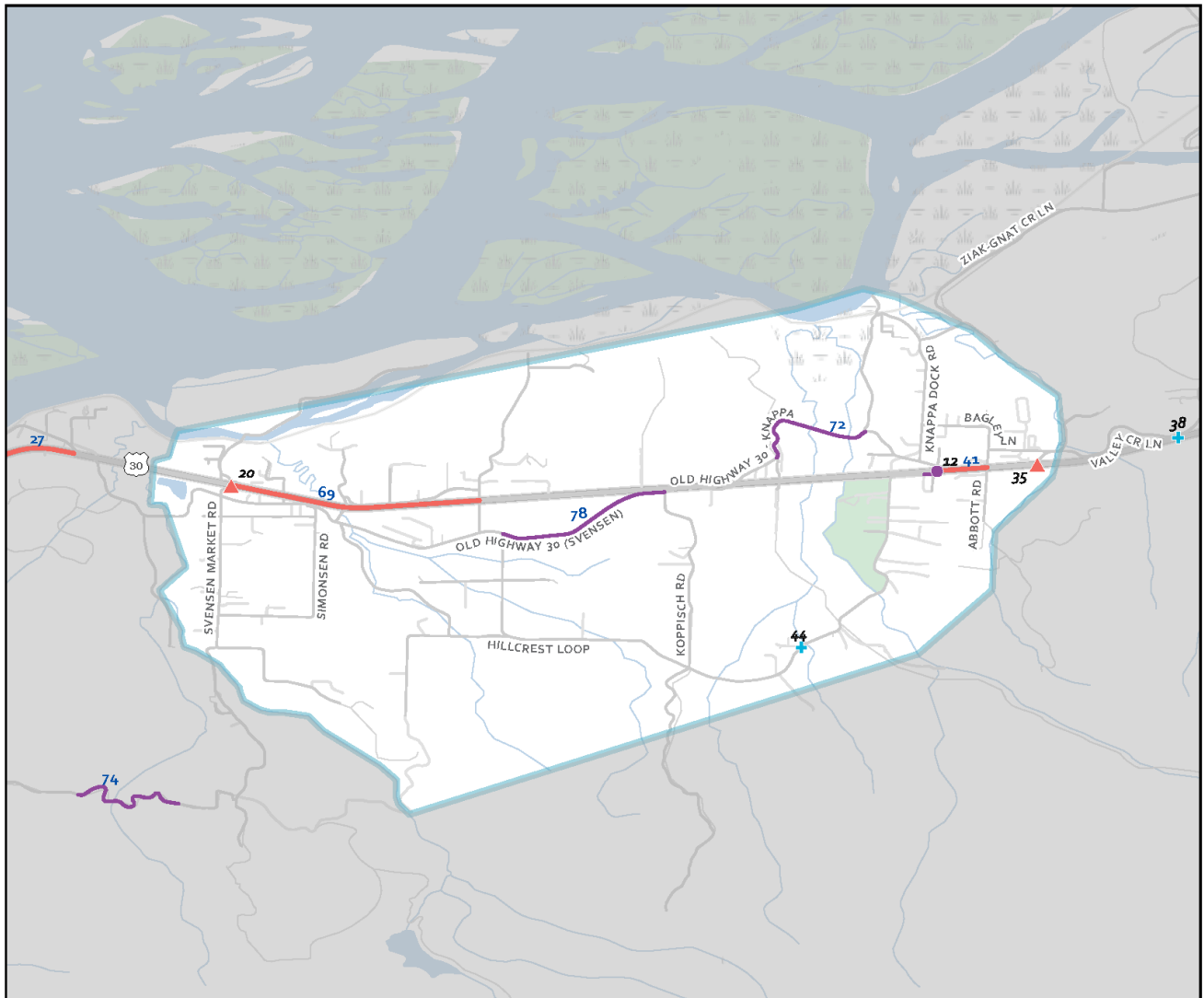
Yellow = two flags met; Red = all three flags met

Top emphasis areas with respect to the Knappa/Svensen study area are:

- Impaired Driving
- Intersection
- Nighttime
- Aging Drivers (65+ years of age)
- Young Drivers
- Pedestrian

HIGH INJURY NETWORK

Figure 36 shows the location of the County-wide High Injury Network (HIN) relative to the local area boundary.



High Injury Network (HIN) Segments & Intersections

0 0.5 1 2 Miles

- State Highway
- County Road
- City Street
- Private Street

- ▲ State Intersection
- County Intersection
- ◆ City Intersection
- + Private Intersection

 Knappa/Svensen Boundary

Reference number corresponds with HIN Segments Table

Reference number corresponds with HIN Intersections Table



FIGURE 36. COUNTY HIGH INJURY NETWORK IN KNAPPA/SVENSEN STUDY AREA

JEWELL/ELSIE STUDY AREA

SUMMARY OF CRASHES

From 2019 to 2023, there were 108 crashes in the Jewell/Elsie study area, including portions of US 26, OR 202, OR 103, and unincorporated County areas between them, 8 of which resulted in fatal or serious injuries. Countywide, this represents 3.4% of all crashes and 3.4% of all KA crashes, respectively.

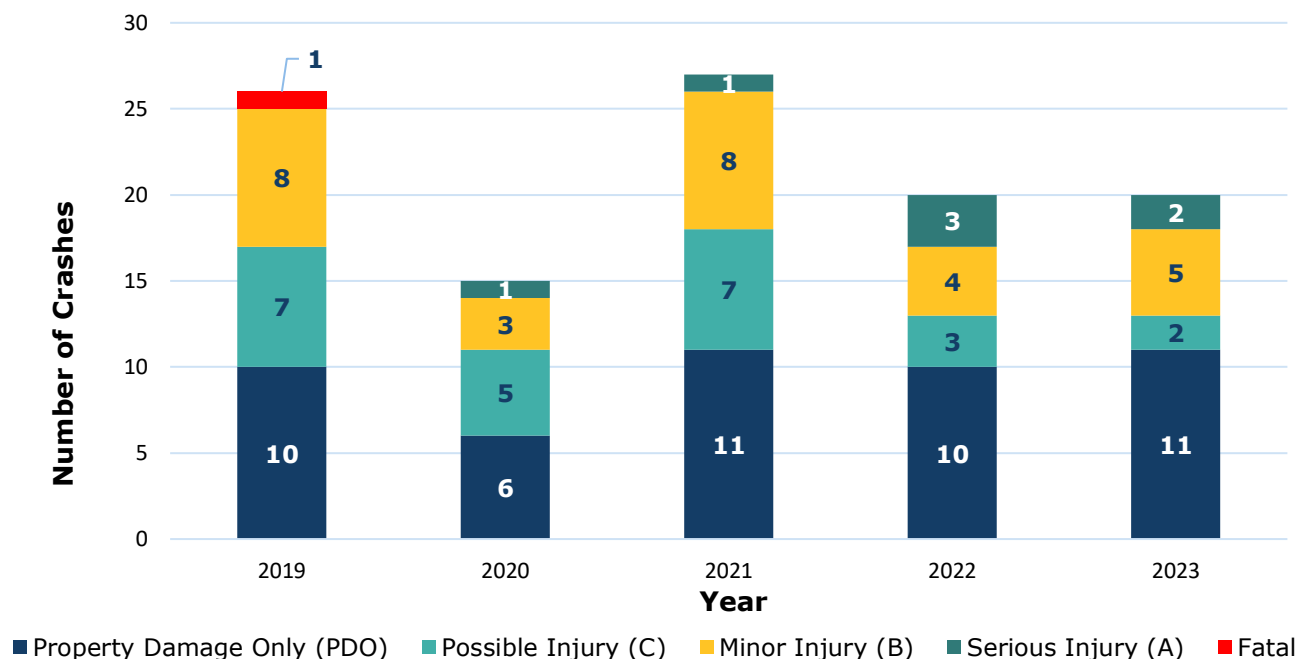


FIGURE 37. JEWELL/ELSIE STUDY AREA CRASH SEVERITY BY YEAR (2019 TO 2023)

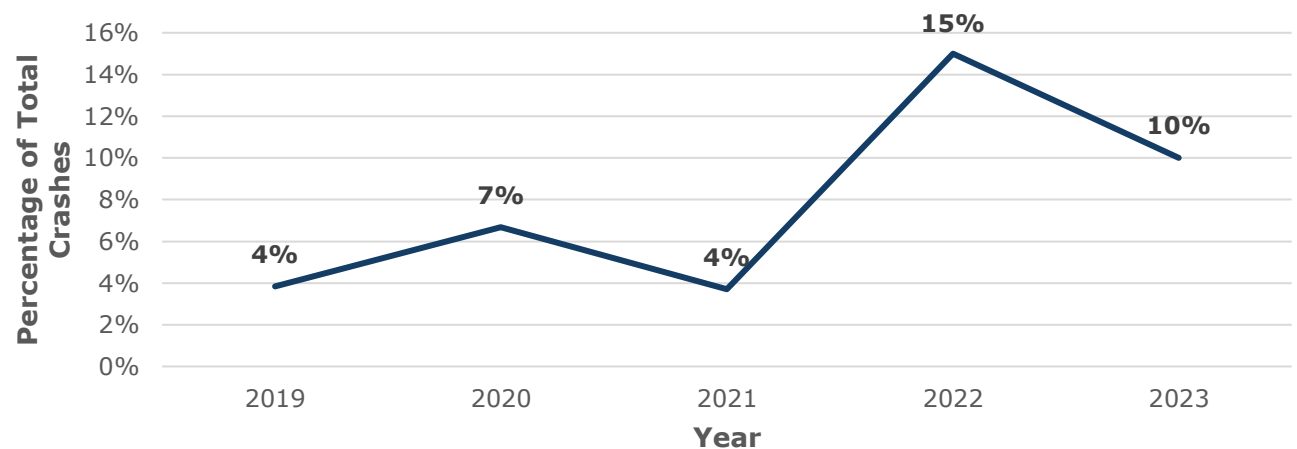


FIGURE 38. PROPORTION OF FATAL AND SERIOUS INJURY CRASHES IN JEWELL/ELSIE STUDY AREA BY YEAR (2019-2023)

LOCAL CRASH TRENDS

Crash Types

Figure 39 shows the most frequent crash types and the crash types that most often result in serious injury or fatality (KA). Crash types that occurred 2% of the time or less are not shown in either figure.

Many crashes in the Jewell/Elsie study area were classified as crashes with a fixed-object and rear-end crashes. The category of “other” often refers to self-reported incidents such as not following regulatory signs, vehicle stalling, or driving a defective vehicle. Fixed-object and non-collision crash types (usually rollover crashes or other crashes not involving another vehicle/pedestrian/bicycle) most frequently resulted in serious injury or fatality.

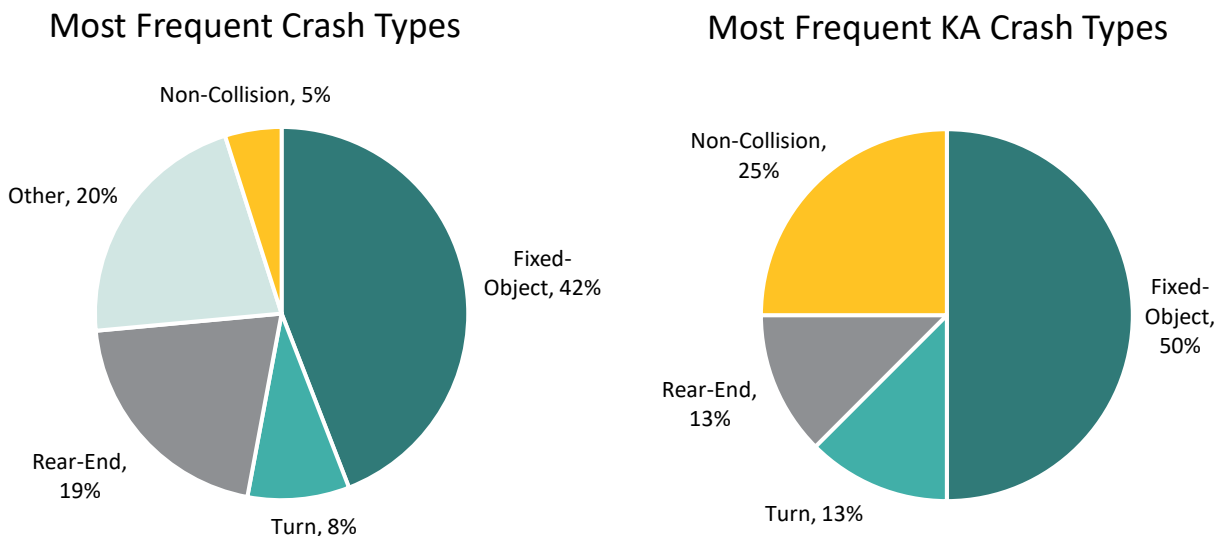


FIGURE 39. COMMON CRASH TYPES IN JEWELL/ELSIE STUDY AREA, TOTAL AND THOSE RESULTING IN FATAL OR SERIOUS INJURY (KA) (2019-2023)

Crash Causes

Frequent crash causes include driving too fast for conditions (but not exceeding the speed limit) (22%). KA crashes were most often caused by driving too fast (not exceeding the limit) (38%), followed by fatigue, following too closely, inattention, improper driving (such as not following regulatory signs, vehicle stalling, or driving a defective vehicle), and reckless driving (each making up 13% of KA crashes).

Crash Attributes

Commonly occurring crash attributes for KA crashes include speeding (50%), a vehicle departing the lane or roadway (50%), motorcycles (38%), and alcohol or drugs (13% and 25%, respectively). Thirty-eight percent of KA crashes were attributed to a horizontal or vertical curve, 25% on straight roadway segments, and no KA crashes were reported at intersections.

EMPHASIS AREAS

Table 14 shows the relationship between various crash attributes and statewide averages, all local crashes, and local crashes involving fatalities or serious injuries (KA crashes). Attributes that meet at least two flag criteria are highlighted in yellow, and those meeting all three are shown in red. (The flag criteria are explained in detail before Table 5.) These flagged attributes point to key safety issues in the region and should help inform the selection of emphasis areas. In general, the more flags an attribute has, the more significant its potential impact on roadway safety.

TABLE 14. JEWELL/ELSIE STUDY AREA CRASH ATTRIBUTE AND FLAGS MET

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
ROADWAY OR LANE DEPARTURE CRASHES	JEWELL/ELSIE KA: 50% JEWELL/ELSIE ALL: 40% STATEWIDE KA: 41%	✓	✓	✓
INTERSECTION CRASHES	JEWELL/ELSIE KA: 0% JEWELL/ELSIE ALL: 15% STATEWIDE KA: 36%			
NIGHTTIME (DARK/DAWN/DUSK) CRASHES	JEWELL/ELSIE KA: 25% JEWELL/ELSIE ALL: 38% STATEWIDE KA: 25%	✓	✓	
SPEED-RELATED CRASHES	JEWELL/ELSIE KA: 50% JEWELL/ELSIE ALL: 33% STATEWIDE KA: 24%	✓	✓	✓
CRASHES INVOLVING ALCOHOL AND/OR DRUGS	JEWELL/ELSIE KA: 38% JEWELL/ELSIE ALL: 9% STATEWIDE KA: 22%	✓	✓	✓
CRASHES INVOLVING ALCOHOL ONLY	JEWELL/ELSIE KA: 13% JEWELL/ELSIE ALL: 7% STATEWIDE KA: 17%	✓		✓
CRASHES INVOLVING MOTORCYCLES	JEWELL/ELSIE KA: 38% JEWELL/ELSIE ALL: 6% STATEWIDE KA: 14%	✓	✓	✓
CRASHES INVOLVING BICYCLISTS	JEWELL/ELSIE KA: 0% JEWELL/ELSIE ALL: 0% STATEWIDE KA: 4%			
CRASHES INVOLVING PEDESTRIANS	JEWELL/ELSIE KA: 0% JEWELL/ELSIE ALL: 0% STATEWIDE KA: 10%			

ATTRIBUTE	PROPORTION OF CRASHES	FLAG 1	FLAG 2	FLAG 3
CRASHES INVOLVING DISTRACTED DRIVERS	JEWELL/ELSIE KA: 0% JEWELL/ELSIE ALL: 5% STATEWIDE KA: 9%			
CRASHES INVOLVING YOUNG DRIVER (15-21)	JEWELL/ELSIE KA: 0% JEWELL/ELSIE ALL: 13% STATEWIDE KA: 14%			
CRASHES INVOLVING AGING DRIVER (65+)	JEWELL/ELSIE KA: 25% JEWELL/ELSIE ALL: 12% STATEWIDE KA: 22%	✓	✓	✓
CRASHES IN WORK ZONES	JEWELL/ELSIE KA: 0% JEWELL/ELSIE ALL: 3% STATEWIDE KA: 1%			
CRASHES INVOLVING SCHOOL BUS OR SCHOOL ZONE	JEWELL/ELSIE KA: 0% JEWELL/ELSIE ALL: 0% STATEWIDE KA: 1%			

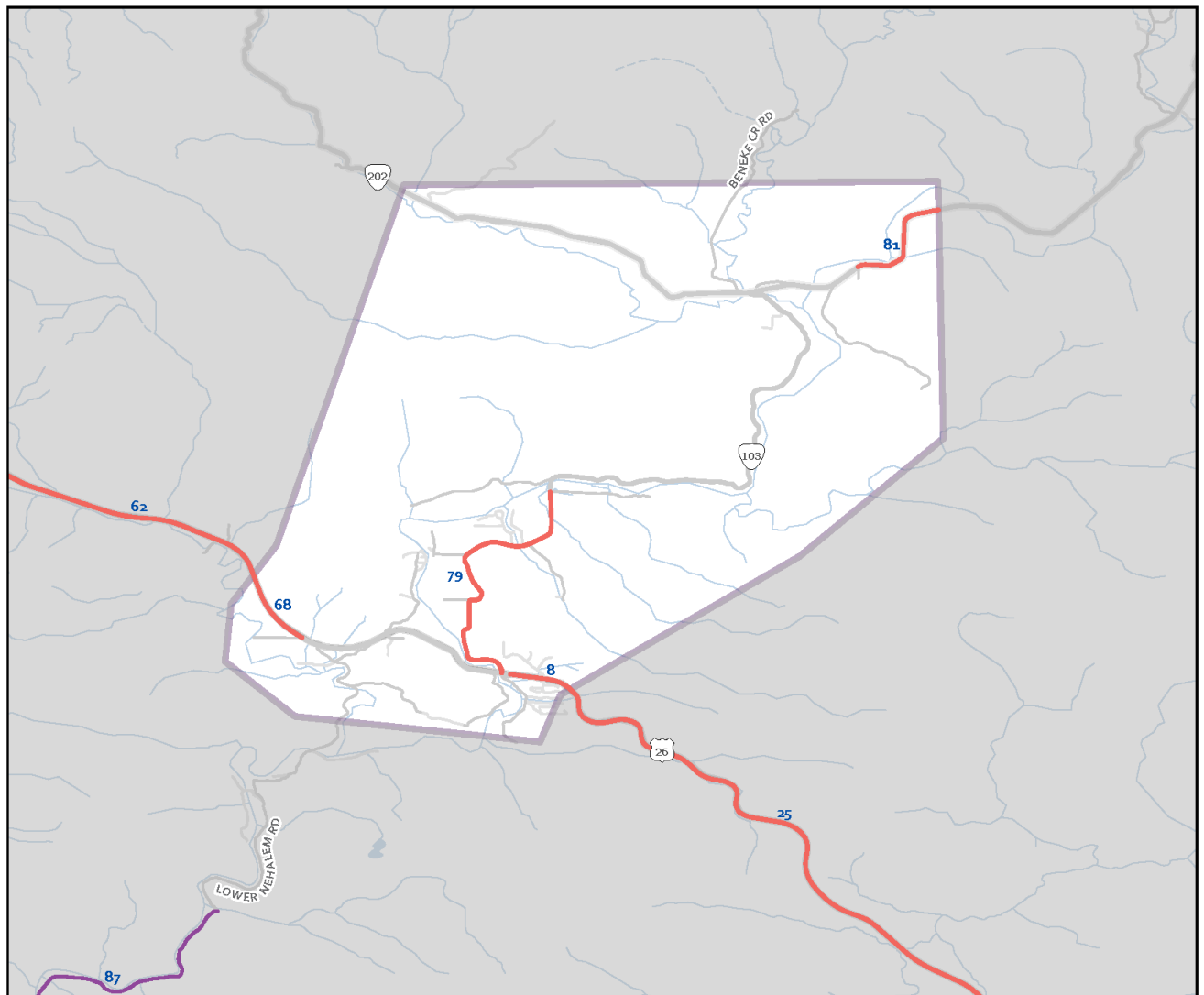
Yellow = two flags met; Red = all three flags met

Top emphasis areas with respect to the Jewell/Elsie study area are:

- Roadway and Lane Departure
- Impaired Driving
- Intersection
- Nighttime
- Aging Drivers (65+ years of age)
- Motorcyclist

HIGH INJURY NETWORK

Figure 40 below shows the location of the County-wide High Injury Network (HIN) relative to the local area boundary.



High Injury Network (HIN) Segments & Intersections

- State Highway
- County Road
- City Street
- Private Street

- ▲ State Intersection
- County Intersection
- ◆ City Intersection
- + Private Intersection

 Jewell/Elsie Boundary

Reference number corresponds with HIN Segments Table

Reference number corresponds with HIN Intersections Table

0 1.25 2.5 5 Miles



FIGURE 40. COUNTY HIGH INJURY NETWORK IN JEWELL/ELSIE STUDY AREA

ARCH CAPE/COVE BEACH STUDY AREA

SUMMARY OF CRASHES

From 2019 to 2023, there were 29 crashes in the Arch Cape and Cove Beach area, including portions of Hwy 101, and none of which resulted in fatal or serious injuries. Countywide, this represents 0.9% of all crashes.

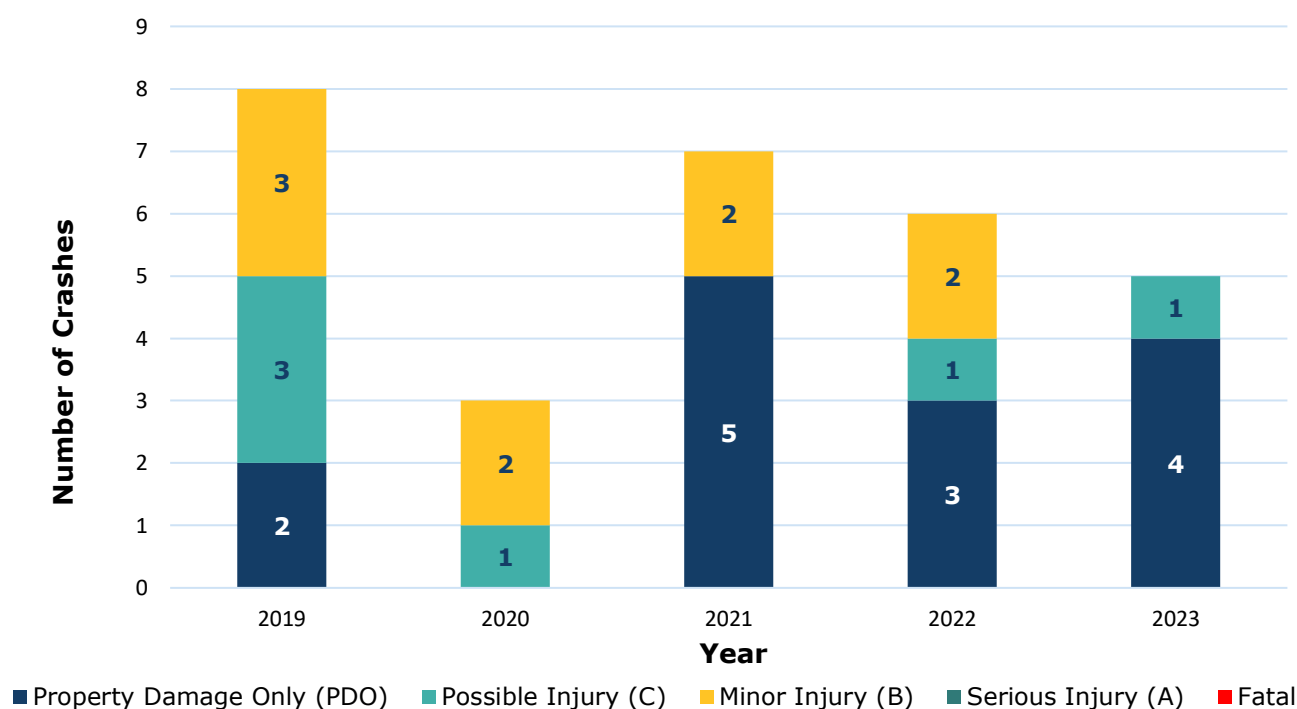


FIGURE 41. ARCH CAPE/COVE BEACH STUDY AREA CRASH SEVERITY BY YEAR (2019 TO 2023)

LOCAL CRASH TRENDS

Crash Types

There were no fatal or serious injury crashes in Arch Cape/Cove Beach study area between 2019 and 2023. The most common crash types were with fixed objects, rear-end, and other (which often refers to self-reported incidents such as not following regulatory signs, vehicle stalling, or driving a defective vehicle) (Figure 42).

Most Frequent Crash Types

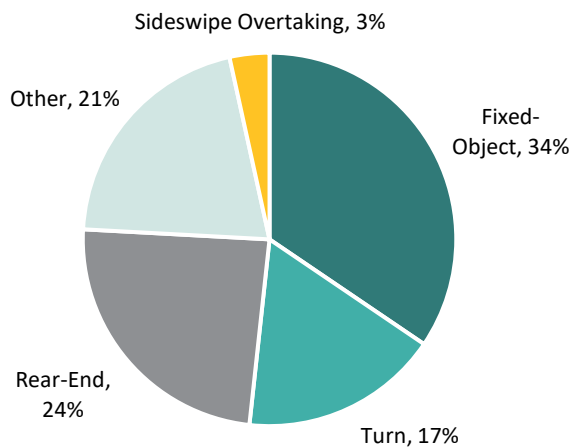


FIGURE 42. COMMON CRASH TYPES IN ARCH CAPE/COVE BEACH STUDY AREA (2019-2023)

Crash Causes & Attributes

Crashes were most often caused by driving too fast (not exceeding the limit) (21%), and inattention (14%). Crashes involving young drivers made up 13% of all crashes, and 17% involved older drivers. Poor conditions such as wet, icy, or snowy roads (45%) or dusk, dark, or dawn lighting conditions (41%) were common crash attributes in this area. Nearly one quarter of crashes were speed-related (24%), and 28% involved a vehicle leaving the roadway. Thirty-one percent of all crashes occurred at an intersection, 34% on a straight segment, and 21% on a vertical curve.

EMPHASIS AREAS

Emphasis areas are typically guided by the crash attributes most frequently or disproportionately associated with KA crashes in a given area. While there were no KA crashes in Arch Cape/Cove Beach during this time period, the trends described above may be useful in guiding any future emphasis areas or safety recommendations.

HIGH INJURY NETWORK

Figure 43 below shows the location of the County-wide High Injury Network (HIN) relative to the local area boundary. **There are no HIN segments or intersections that fall within the Arch Cape/Cove Beach boundary.** However, 28 of 29 crashes in Arch Cape/Cove Beach occurred on Highway 101, eight at intersections with other roadways, and the rest on straight segments.

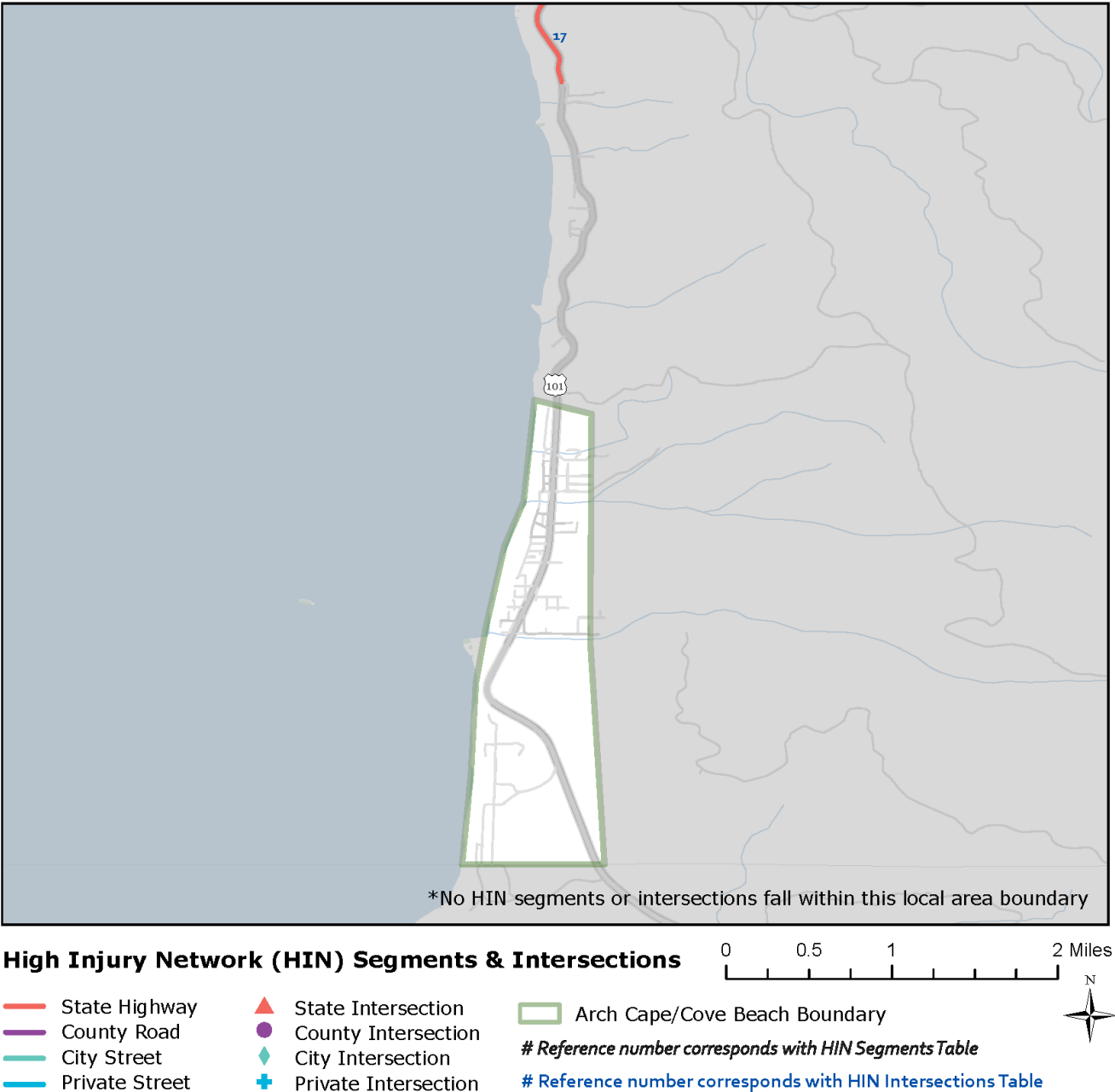


FIGURE 43. COUNTY HIGH INJURY NETWORK IN ARCH CAPE/COVE BEACH STUDY AREA

WESTPORT STUDY AREA

SUMMARY OF CRASHES

From 2019 to 2023, there were 18 crashes in Westport, including nearby portions of US 30, and none of which resulted in fatal or serious injuries. Countywide, this represents 0.6% of all crashes.

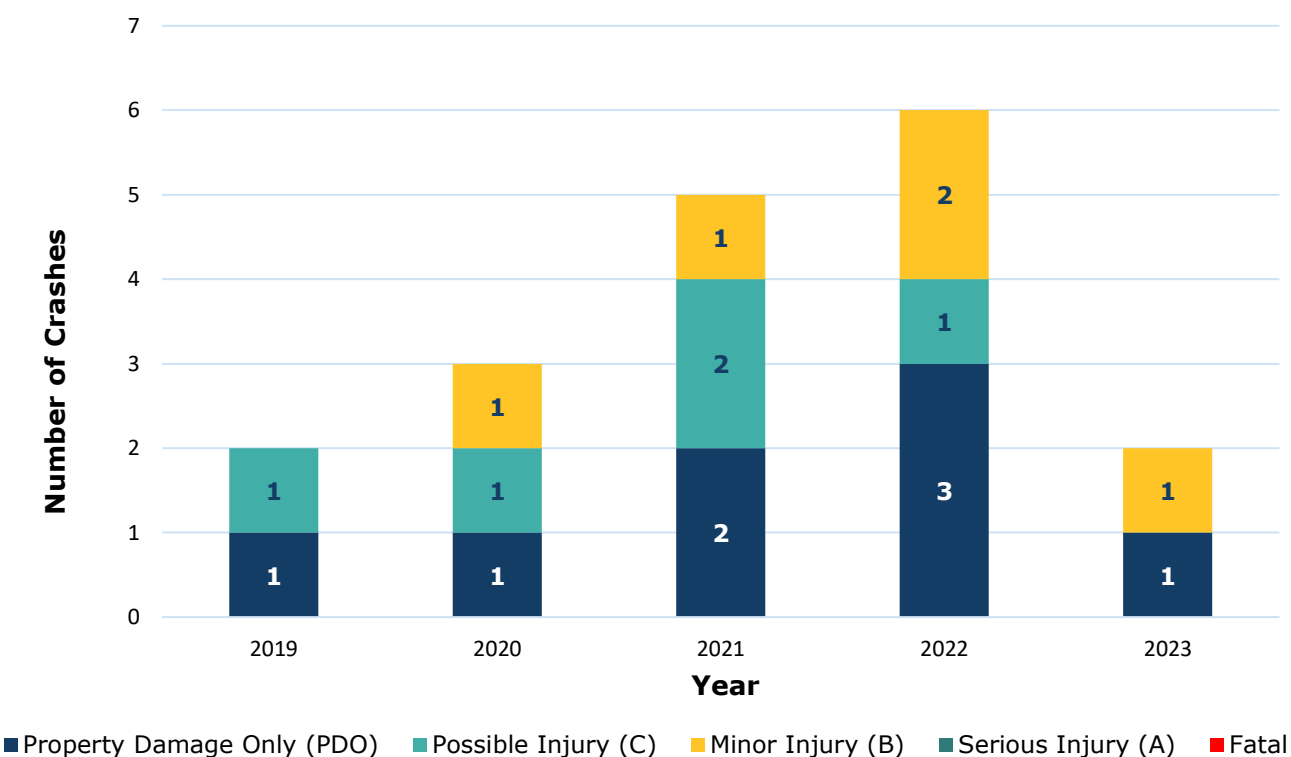


FIGURE 44. WESTPORT STUDY AREA CRASH SEVERITY BY YEAR (2019 TO 2023)

LOCAL CRASH TRENDS

Crash Types

There were no fatal or serious injury crashes in Westport between 2019 and 2023. The most commonly occurring crash types include turning, fixed-object, and rear-end crashes (Figure 45). There was one crash with a pedestrian with a non-severe injury.

Most Frequent Crash Types

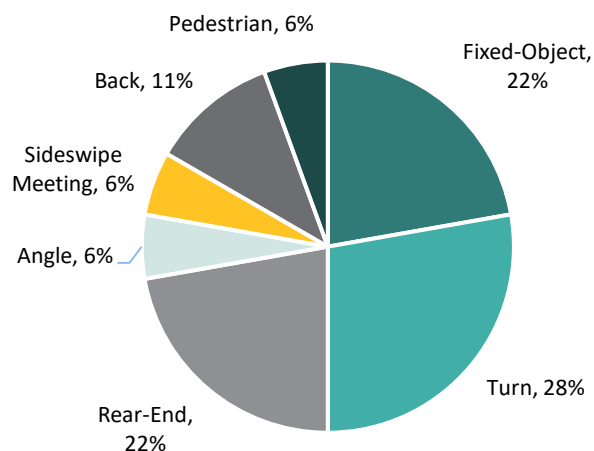


FIGURE 45. COMMON CRASH TYPES IN WESTPORT STUDY AREA (2019-2023)

Crash Causes

Crashes were most frequently caused by not yielding the right-of-way (28%), distraction (17%), physical illness (11%), and other improper driving (11%), such as not following regulatory signs, vehicle stalling, or driving a defective vehicle.

Crash Attributes

While none of these factors led to KA crashes in this area, commonly occurring crash attributes include a vehicle leading the roadway (39%), wet, icy, or snowy conditions (28%), speeding (22%), and dark, dusk, or dawn lighting conditions (17%). Young drivers were involved in 17% of all crashes, and 17% involved older people. One-third of crashes occurred at intersections (33%), 33% on straight segments, and 17% in an alley or driveway.

EMPHASIS AREAS

Emphasis areas are typically guided by the crash attributes most frequently or disproportionately associated with KA crashes in a given area. While there were no KA crashes in Westport during this time period, the trends described above may be useful in guiding any future emphasis areas or safety recommendations.

HIGH INJURY NETWORK

Figure 46 shows the location of the County-wide High Injury Network (HIN) relative to the local area boundary. **There are no HIN segments or intersections that fall within the Westport boundary.** However, 17 of 18 crashes in Westport occurred on Highway 30, three at intersections with other roadways, and the rest on straight segments.

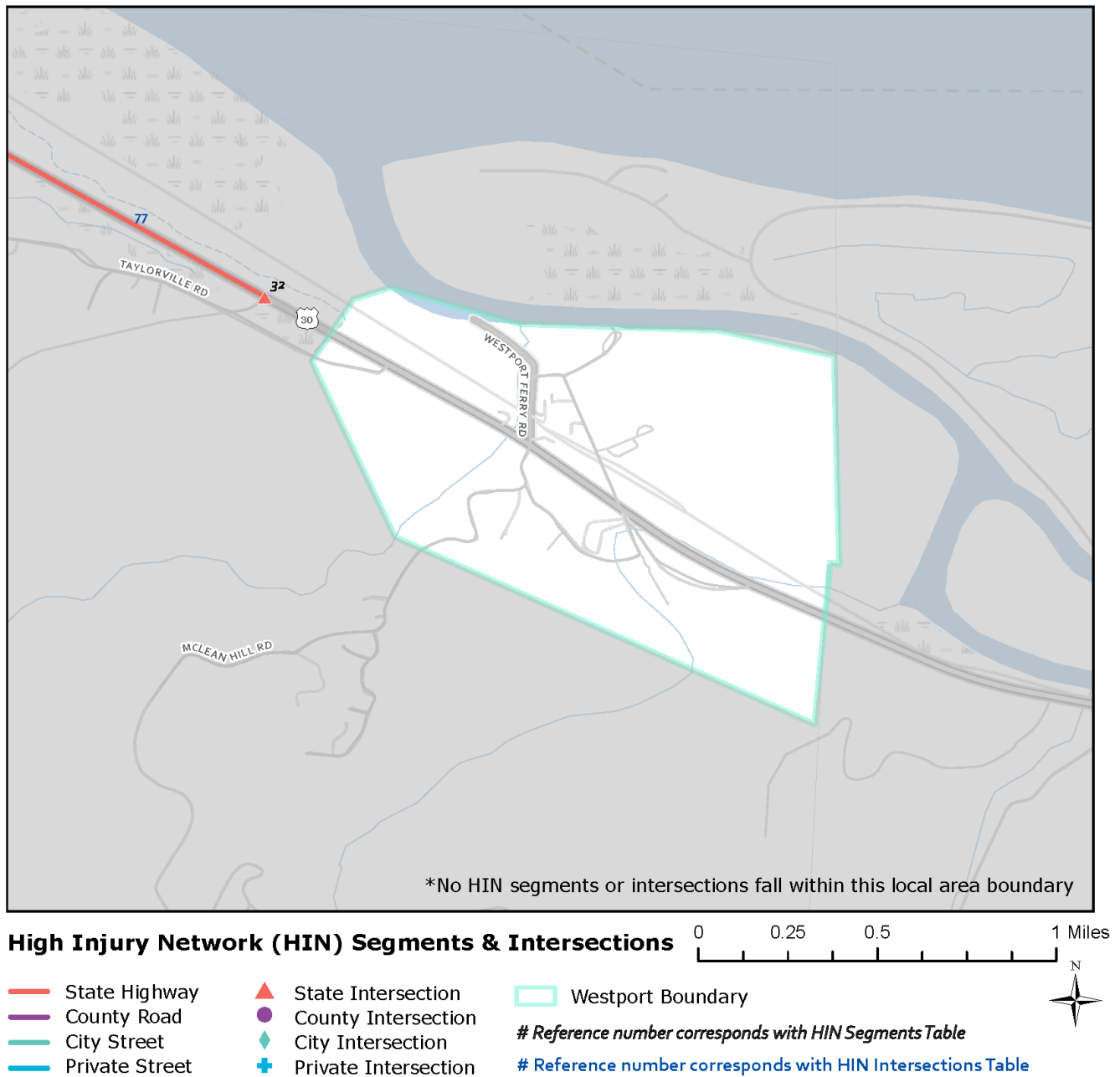


FIGURE 46. COUNTY HIGH INJURY NETWORK IN WESTPORT STUDY AREA

EQUITY ASSESSMENT

To better understand how crashes in Clatsop County have impacted residents, a comparison of the crash data to the populations classified as disadvantaged in the Oregon Social Equity Index (SEI)¹⁰ was conducted.

ODOT developed the SEI tool using data from the American Community Survey to identify areas with concentrations of disadvantaged populations according to age, ability, income, language, race, and ethnicity. In an effort to prioritize equity, the SEI tool categorizes social equity areas as low, low-medium, medium-high, or high disparity; areas with higher disparity have a higher percentage of disadvantaged populations. For the purposes of this study, Medium-High Disparity and High Disparity tracts from the SEI tool are considered disadvantaged.

Figure 47 presents the fatal and serious injury crash rates by area, population, and roadway lane miles. Roughly 21.3% (by area) of the county falls into the medium-high or high disadvantaged category, encompassing about 32.3% of the population. The comparisons featured in Figure 47 demonstrate the relative burden of fatal and serious injury crashes faced by these communities in Clatsop County.

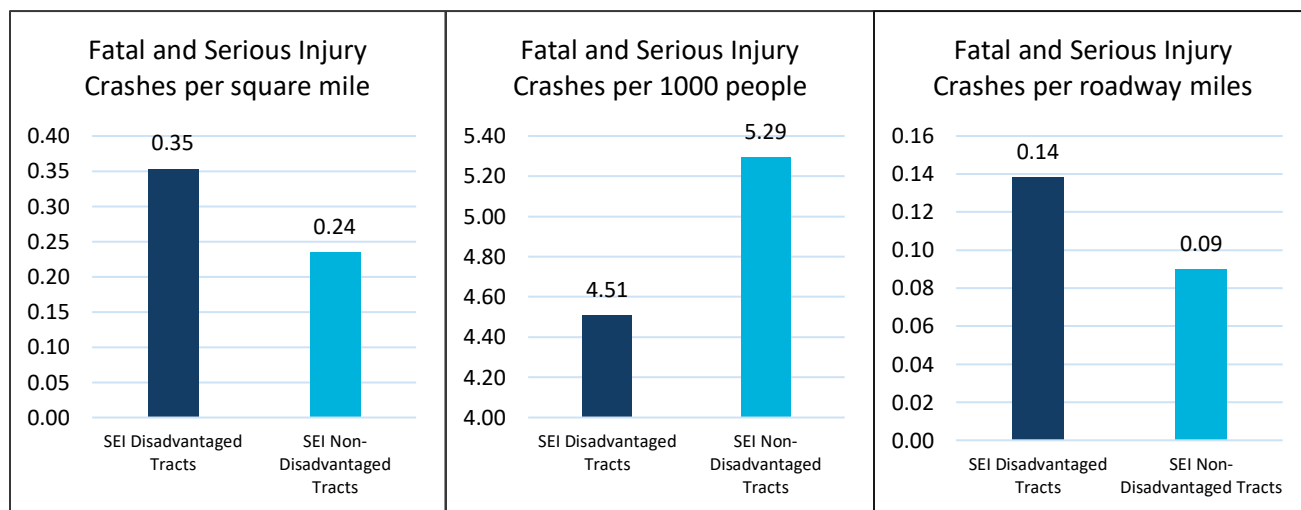


FIGURE 47. FATAL AND SERIOUS INJURY CRASH RATE BY AREA, POPULATION, AND ROADWAY LANE MILES

¹⁰ Oregon Social Equity Index web app, Oregon Department of Transportation.
<https://www.arcgis.com/apps/View/index.html?appid=bbd3d9861fcd40ffa4085d457e4361a7>

Figure 48 displays the SEI tracts in relation to the HIN in Clatsop County. There are 14 tracts that qualify as disadvantaged (high or medium/high disparity); 23 out of 49 HIN intersections are located in a disadvantaged tract, as well as 19 out of 87 HIN segments.

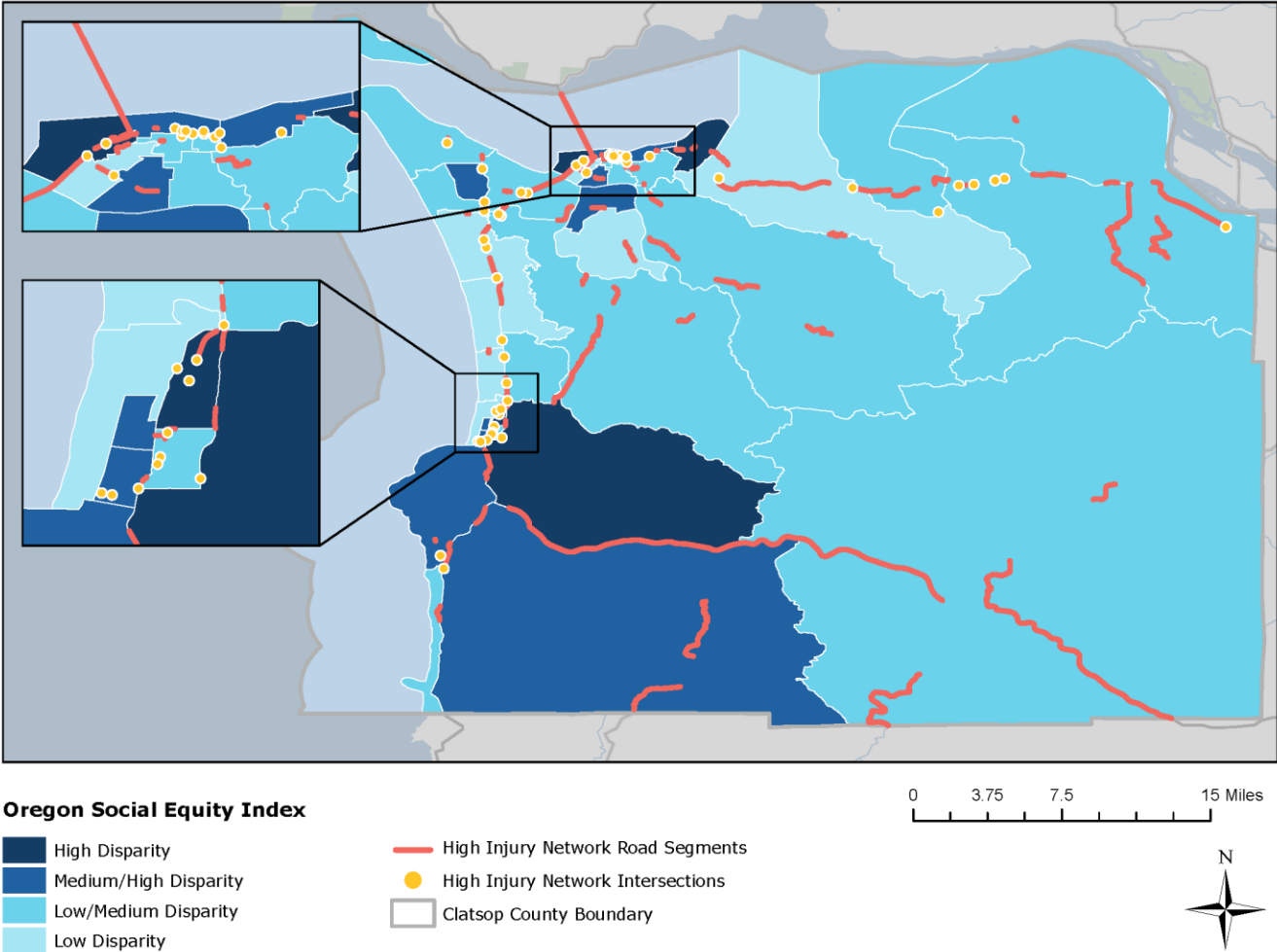


FIGURE 48. CLATSOP COUNTY HIGH INJURY NETWORK AND OREGON SOCIAL EQUITY INDEX

NEXT STEPS

Proactive investment in SEI-disadvantaged tracts is essential to address existing disparities and to ensure equitable access to safe transportation infrastructure. In the next steps of the TSAP, crash history, Emphasis Areas, equity impacts, and input from the Task Force and community members will be compiled to select up to 10 High-Priority Safety Corridors for which solutions will be developed.

APPENDIX

CONTENTS

SECTION 1: GLOSSARY OF TERMS

SECTION 1: GLOSSARY OF TERMS

The glossary of terms is divided into the following sections:

- Abbreviations
- General Terms
- Crash Data Definitions
 - Crash Cause
 - Crash Characteristics
 - Road User Demographic
 - Roadway Characteristics
 - Crash Type
- Emphasis Area Definitions

ABBREVIATIONS

CDP – Census Designated Place

EPOD – Equivalent Property Damage Only

HIN – High Injury Network

KA – Fatal (K) or Serious Injury (A)

ODOT – Oregon Department of Transportation

SEI – Social Equity Index

TSAP – Transportation Safety Action Plan

VMT – Vehicle Miles Traveled

GENERAL TERMS

Census Tract	A small, standardized area defined by the U.S. Census Bureau used for statistical analysis. Used in crash analysis to examine trends by neighborhood or population group.
City Street	A local street within city boundaries, owned and maintained by the city government. These typically support local access and lower speeds.
Community Member	A local resident or stakeholder who contributes feedback or input into planning or analysis, especially during public engagement efforts.
Condition	A general term referring to the road surface, lighting, weather, or vehicle state at the time of the crash (e.g., “wet road” or “icy surface”).

County Road	Roads owned and maintained by a county government. They are typically outside city limits but not part of the state highway system.
Crash Cause	The reason assigned to a crash based on available evidence, such as driver behavior or environmental conditions.
Crash Characteristic	A descriptive feature of a crash such as lighting condition, weather, road surface, or whether the vehicle left the roadway. These help identify environmental or contextual risk factors.
Crash Severity	Classification of a crash based on the worst outcome. Levels include Fatal (K), Serious Injury (A), Minor Injury (B), Possible Injury (C), and Property Damage Only (PDO)
Crash Type	A classification based on the manner of collision (e.g., angle, rear-end, sideswipe, head-on). It describes how the crash physically occurred.
Demographics	Characteristics of the people involved in crashes, such as age, gender, race, or income level. These are often analyzed to understand which population groups may be at greater risk.
Emphasis Area	A traffic safety focus category identified by ODOT or local agencies for targeted safety improvement (e.g., pedestrian safety, intersection crashes). These are often aligned with statewide or regional safety plans.
Flag	A indicator used to determine emphasis area criteria
Jurisdiction	The governmental entity responsible for a roadway where a crash occurs—such as city, county, state, or federal. Jurisdiction determines who maintains the road and is often used to analyze crash patterns by agency responsibility .
KA Crash	A shorthand for serious crashes: K = fatal crash, A = serious injury crash.
Natural Breaks Method	A statistical method used to group data into categories based on where significant differences (“breaks”) occur in the distribution. Helps visually represent where patterns shift.
Primary Collision Factor	The main cause of a crash as determined by law enforcement or coded in crash data. It refers to the behavior or condition that most directly contributed to the incident (e.g., speeding, failure to yield, inattention)

Private Street	A roadway not maintained by a public agency, often located within gated communities or on private land.
Project Partner	An organization, agency, or stakeholder working collaboratively on this project, such as city governments, ODOT, or public health departments.
Roadway Intersection	A location where two or more roads cross or join, often with stop signs or traffic signals. These areas are analyzed separately due to higher crash rates
Roadway Segment	A specific section of road used in crash analysis, usually defined by consistent characteristics (e.g., road type, speed limit) and tracked using spatial markers
Rural Community	Areas outside of urban boundaries with lower population density. Often have different roadway characteristics and crash risks than urban areas
State Highway - Regional	A regional highway that provides connections and links to regional centers, statewide or interstate highways, or economic or activity centers of regional significance.
State Highway - Statewide	A statewide highway that provides inter-urban and inter-regional mobility and provide connections to larger urban areas, ports, and major recreation areas that are not directly served by Interstate Highways. Typically carries significantly higher traffic volumes than other state highways.
Urban Community	A geographic area defined by population density and development level, typically within city limits or metropolitan areas.
Vehicle Miles Traveled (VMT)	A measure of total miles driven by all vehicles in a specific area or on a specific road over a period of time. Used to calculate crash rates and compare roadway safety across regions .

CRASH DATA DEFINITIONS

CRASH CAUSE	
Did Not Yield Right-of-Way	Failing to let another road user (driver, pedestrian, etc.) go first when legally required to do so.
Distraction	Driver's attention was diverted by something inside or outside the vehicle (e.g., phone use, eating)

Driving Too Fast for Conditions (Not Exceeding Limit)	Driving at a speed that was too fast for road, weather, or traffic conditions—even if under the speed limit.
Drove left of center on two way road (Straddling center line)	A crash where the vehicle crossed or drove on the center line into oncoming traffic lanes.
Failed to Avoid Vehicle Ahead	Driver was unable to stop in time or avoid crashing into a slower or stopped vehicle ahead.
Fatigue	Driver was drowsy or overly tired, which reduced their ability to react or stay alert.
Following Too Close	Driving too close behind another vehicle and not having enough time or space to stop safely.
Inattention	Driver was not paying full attention to the driving task, such as looking away or being mentally distracted.
Made Improper Turn	Turning in an unsafe or illegal way, such as turning from the wrong lane or making an illegal U-turn.
Other (Improper Driving)	Unsafe driving behavior not listed under specific causes, such as erratic or aggressive driving.
Other (Not Improper Driving)	A crash cause that's not directly the driver's fault—such as wildlife, medical emergencies, or road hazards.
Passed Stop Sign or Red Flasher	Driver failed to stop at a stop sign or flashing red signal and entered the intersection unsafely.
Physical Illness	Crash occurred due to a medical condition like a heart attack or seizure
Speed Racing	Participating in illegal street races or driving competitively at high speeds.
View Obscured	Driver's vision was blocked by something—like parked vehicles, vegetation, or sun glare.

CRASH CHARACTERISTIC

Alcohol-Impaired	Crash where one or more drivers were under the influence of alcohol at the time of the incident.
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Drug-Impaired	Crash involving a driver affected by legal or illegal drugs.
Lighting Conditions	Describes whether the crash occurred in daylight, darkness, or low-light situations like dawn or dusk.
Non-Passenger Car Motor Vehicle Type Involved	A crash involving vehicles other than standard passenger cars—such as motorcycles, buses, or trucks.
Road Surface Conditions	Describes the road at the time of the crash—e.g., dry, wet, snowy, or icy—which may have contributed.
Speed Related	Crashes where unsafe speed—either over the limit or too fast for conditions—was a contributing factor.
Vehicle Left the Roadway	The vehicle left its lane or the edge of the road, often leading to hitting an object or running off the road.

ROAD USER DEMOGRAPHIC

Older Driver (Age >65)	A crash involving a driver age 65 or older
Younger Driver (Age <21)	A crash involving a driver under the age of 21

ROADWAY CHARACTERISTIC

Alley or Driveway	A crash that happened while entering or exiting a private drive, alley, or small side road.
At intersection or intersection related	Crash occurred within or close to an intersection or was caused by turning or crossing movements.
Horizontal Curve	A crash that happened on a bend in the road where the road curves left or right.
Stop Sign	A crash that occurred at an intersection controlled by a stop sign.
Straight Segment	A crash that occurred on a straight stretch of road (no curves or hills).
Traffic Signal	A crash that occurred at a location controlled by a traffic light.
Vertical Curve	A crash that occurred on a rise or dip in the road—like a hilltop or valley—that may limit visibility.

CRASH TYPE

Angle	A crash where vehicles hit each other at an angle, usually at intersections (e.g., T-bone crashes).
Bicycle	A crash involving a bicyclist who is struck by a vehicle or collides with another road user.
Fixed-Object	A crash where a moving vehicle hits a stationary object like a pole, tree, barrier, or wall.
Head-On	A severe crash where two vehicles traveling in opposite directions collide front-to-front.
Pedestrian	A crash that involves a person walking or crossing the street and being struck by a vehicle.
Rear-End	A crash where one vehicle strikes the back of another vehicle traveling in the same direction.
Sideswipe Overtaking	A crash where two vehicles traveling in the same direction sideswipe each other, usually while passing or merging
Turning	A crash that occurs while a vehicle is making or preparing to make a turn, including left, right, or U-turns.

EMPHASIS AREA DEFINITIONS

Crashes In Work Zones	Crashes that happen in or near areas marked for construction, maintenance, or utility work. These zones often involve altered traffic patterns or signage and are flagged accordingly in crash records
Crashes Involving Aging Driver (65+)	Crashes where a driver age 65 or older was involved. These drivers may be affected by slower reaction times, medical issues, or vision limitations
Crashes Involving Alcohol and/or Drugs	Crashes in which at least one involved party was reported or tested as having consumed alcohol or drugs (prescription or illegal). Based on law enforcement observations, field tests, or toxicology results
Crashes Involving Alcohol Only	A subset of the above where alcohol—but not drugs—was involved. Confirmed through observations or blood alcohol concentration (BAC) tests

Crashes Involving Bicyclists	Crashes where a bicyclist is a direct participant, whether on the road, in a bike lane, or crossing an intersection.
Crashes Involving Distracted Drivers	Crashes where the driver's attention was diverted from driving by an activity (e.g., phone use, eating, adjusting controls), leading to a collision
Crashes Involving Motorcycles	Crashes involving at least one motorcycle as a primary participant. These crashes are tracked separately due to the vulnerability of motorcyclists and unique crash patterns
Crashes Involving Pedestrians	Crashes that involve a person walking or using a mobility aid who is struck by a vehicle. This includes collisions in crosswalks or other parts of the roadway
Crashes Involving School Bus or School Zone	Crashes that occur near or involve a school bus or in areas marked as school zones, often during designated times. These crashes may involve child pedestrians or result from drivers failing to observe school-related traffic rules
Crashes Involving Young Driver (15-21)	Crashes where a driver under age 21 was involved. This group is tracked due to increased risk from inexperience and behavior patterns
Intersection Crashes	Crashes occurring within the physical boundaries of an intersection or directly caused by maneuvering through it (e.g., turning or crossing). These are recorded when the impact occurs within the extended curb lines or designated "zones" near the intersection.
Nighttime (Dark/Dawn/Dusk) Crashes	Crashes that occur during periods with low natural light: after sunset, before sunrise, or during twilight. The official classification is based on light condition codes: Darkness (with/without street lights), Dawn, or Dusk
Roadway or Lane Departure Crashes	Crashes where a vehicle unintentionally leaves its lane or the roadway entirely. These include vehicles veering off the road and hitting objects or running off embankments. Often associated with loss of control or driver error
Speed-Related Crashes	Crashes in which driving too fast for conditions or exceeding the posted speed limit was a contributing factor. This includes weather or curve-related speeding—even if the legal limit wasn't broken