

## Fatal and Serious Injury Motor Vehicle Crashes:

# Work Zone Crashes

On Minnesota roadways, there were 197 crashes involving a work zone resulting in fatality or serious injury between 2019 and 2023. This is an average of 39 crashes per year and accounted for 2.1% of all the fatal and serious injury crashes in this period.

Work Zones are a Strategic Focus Area. The strategic focus areas are emerging priorities. They are rising in importance due to factors such as changes in prevalence, public/stakeholder perception, and demographics. Strategies and tactics are available in the 2020-2024 Strategic Highway Safety Plan. ([www.mndot.gov/trafficeng/safety/shsp/index.html](http://www.mndot.gov/trafficeng/safety/shsp/index.html))

Focus Area definitions are published in the SHSP Technical Report. ([www.mndot.gov/trafficeng/safety/shsp/technical-report.pdf](http://www.mndot.gov/trafficeng/safety/shsp/technical-report.pdf))

### Distribution of Work Zone Crashes by Roadway Jurisdiction

	Rural		Urban		Total	
Trunk Highway	29	25%	30	26%	59	52%
County	14	12%	17	15%	31	27%
City	1	1%	19	17%	20	18%
Township	1	1%	0	0%	1	1%
Other	1	1%	2	2%	3	3%
<b>Total</b>	<b>46</b>	<b>40%</b>	<b>68</b>	<b>60%</b>	<b>114</b>	<b>100%</b>

Crashes involving a work zone occur most frequently on the state system.

Rural is defined as a population less than 5,000, per Crash Facts; crashes that are not geolocated are included in total but not rural/urban columns.

### Distribution of Work Zone Crashes by TZD Region

	Rural		Urban		Total	
Northeast	6	75%	2	25%	8	100%
Northwest	2	100%	0	0%	2	100%
East Central	9	64%	5	36%	14	100%
West Central	3	100%	0	0%	3	100%
Southeast	9	69%	4	31%	13	100%
South Central	5	83%	1	17%	6	100%
Southwest	3	60%	2	40%	5	100%
Metro	9	14%	54	86%	63	100%
<b>Total</b>	<b>46</b>	<b>40%</b>	<b>68</b>	<b>60%</b>	<b>114</b>	<b>100%</b>

Crashes involving a work zone occur most frequently in urban areas.

45% of these crashes occurred in Greater Minnesota.

Rural is defined as a population less than 5,000, per Crash Facts; crashes that are not geolocated are included in total but not rural/urban columns.

### Light Conditions

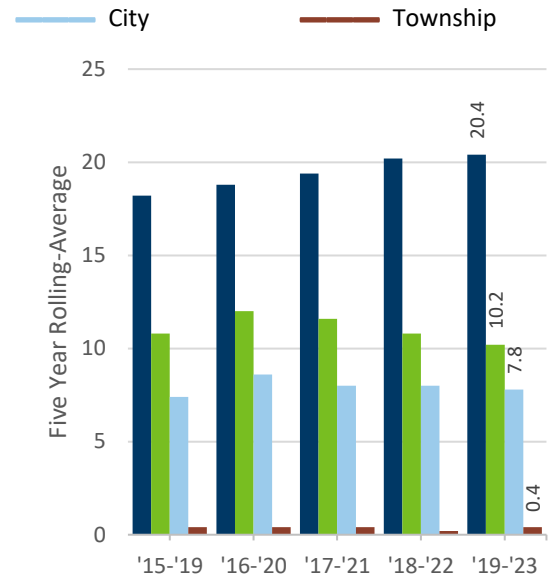
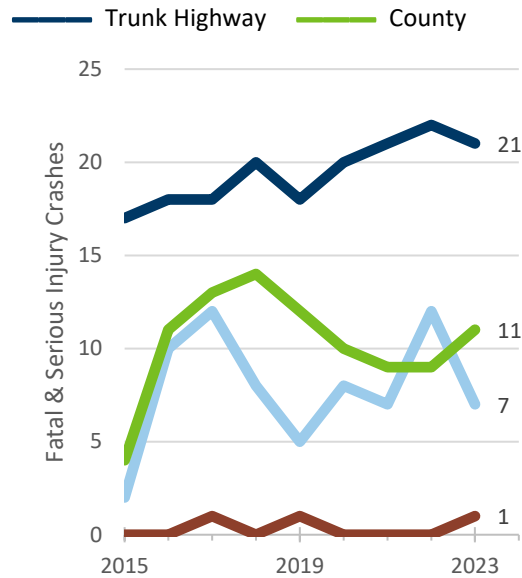
	Focus Area	All KA
Daylight	64.5%	59.7%
Sunrise/Sunset	8.6%	6.2%
Night/Dark	26.9%	33.6%
Street Lights On	16.8%	18.7%
Street Lights Off	0.0%	0.9%
Unknown/No Lighting	10.2%	14.0%
Other/Unknown	0.0%	0.5%

### Roadway Conditions

	Focus Area	All KA
Dry	85.8%	78.3%
Wet	6.6%	8.8%
Snow/Slush/Ice	2.5%	8.8%
Other	5.1%	4.1%

## Trends in Work Zone Crashes

Statewide, the percent of all fatal and serious injury crashes involving a work zone is increasing.



NOTE: In 2016, Minnesota modified the injury severity definitions to align with Federal Standards. This change resulted in an 80% increase in reported serious injury crashes.

## Interaction with other Strategic Highway Safety Plan focus areas

Focus Area	Work Zone Crashes		All K+A Crash Types		Difference	Rank*
Commercial Vehicle	49	24.9%	824	8.8%	+ 16.1%	↑ #1
Older Driver	49	24.9%	1,771	18.9%	+ 6.0%	↑ #2
Motorcycle	39	19.8%	1,572	16.8%	+ 3.0%	↑ #3
Inattentive Driver	16	8.1%	735	7.8%	+ 0.3%	—
Bicyclist	8	4.1%	364	3.9%	+ 0.2%	—
Train	0	0.0%	18	0.2%	- 0.2%	—
Pedestrian	21	10.7%	1,037	11.1%	- 0.4%	—
Younger Driver	30	15.2%	1,495	16.0%	- 0.7%	—
Unbelted Occupant	26	13.2%	1,346	14.4%	- 1.2%	—
Unlicensed Driver	34	17.3%	1,918	20.5%	- 3.2%	↓
Speed	36	18.3%	2,154	23.0%	- 4.7%	↓
Head-on	9	4.6%	1,057	11.3%	- 6.7%	↓
Impaired User	38	19.3%	2,616	27.9%	- 8.6%	↓
Intersection	78	39.6%	4,575	48.8%	- 9.3%	↓
Single Veh. Run-off-road	43	21.8%	2,980	31.8%	- 10.0%	↓
Work Zone	197	100.0%	197	2.1%	N/A	N/A

\* Rankings shows areas with greatest overrepresentation compared to all fatal and serious injury crashes.

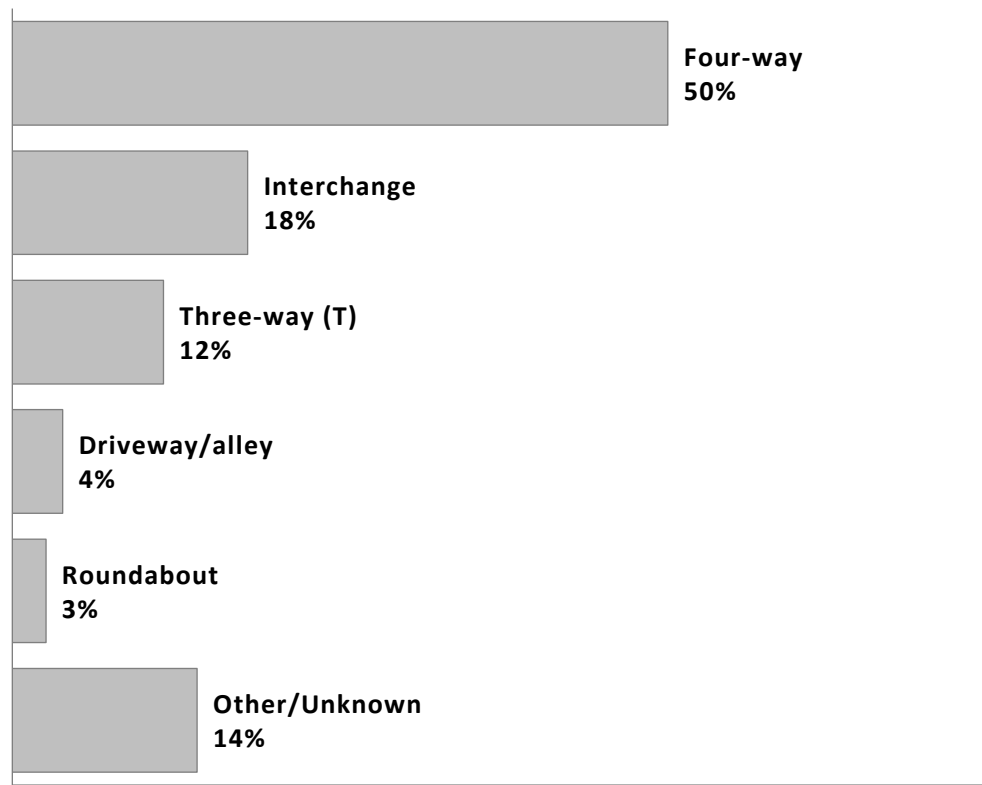
Compared to all fatal and serious injury crashes, the Commercial Vehicle, Older Driver and Motorcycle focus areas are over-represented in crashes involving a work zone. These focus areas may present unique challenges and opportunities for reducing Work Zone Crashes in Minnesota.

### Seasonality of Work Zone Crashes

	3 AM to 6 AM	6 AM to 9 AM	9 AM to 12 PM	12 PM to 3 PM	3 PM to 6 PM	6 PM to 9 PM	9 PM to 12 AM	12 AM to 3 AM	Σ
January	0.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1%
February	0.5%	1.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	2%
March	0.0%	0.0%	1.0%	0.0%	0.0%	1.0%	0.0%	0.0%	2%
April	0.0%	0.0%	1.5%	0.0%	0.5%	1.5%	0.0%	0.0%	4%
May	0.5%	1.0%	1.0%	2.0%	2.5%	1.5%	2.0%	0.0%	11%
June	1.0%	1.5%	2.0%	4.1%	4.1%	1.0%	0.5%	1.0%	15%
July	1.0%	0.0%	4.1%	3.6%	2.0%	3.0%	2.5%	1.0%	17%
August	2.0%	1.5%	0.5%	5.6%	4.1%	1.5%	2.5%	0.5%	18%
September	1.0%	0.5%	2.5%	2.5%	3.0%	3.6%	1.5%	0.0%	15%
October	0.0%	1.5%	0.5%	3.6%	2.0%	1.0%	0.5%	1.0%	10%
November	1.0%	0.0%	0.0%	0.5%	1.0%	1.0%	0.5%	0.5%	5%
December	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	1%
Σ	8%	8%	14%	22%	19%	15%	10%	4%	100%

A fatal or serious injury crash involving a work zone occurred approximately every 9.5 days. These crashes are more prevalent in the summer and autumn & during the afternoon and evening hours; this analysis does not control for existing traffic patterns.

### Top Five Intersection Types (where intersection/interchange related)



About 2 in 5 fatal and serious injury crashes involving a work zone (40%) were intersection or interchange related.