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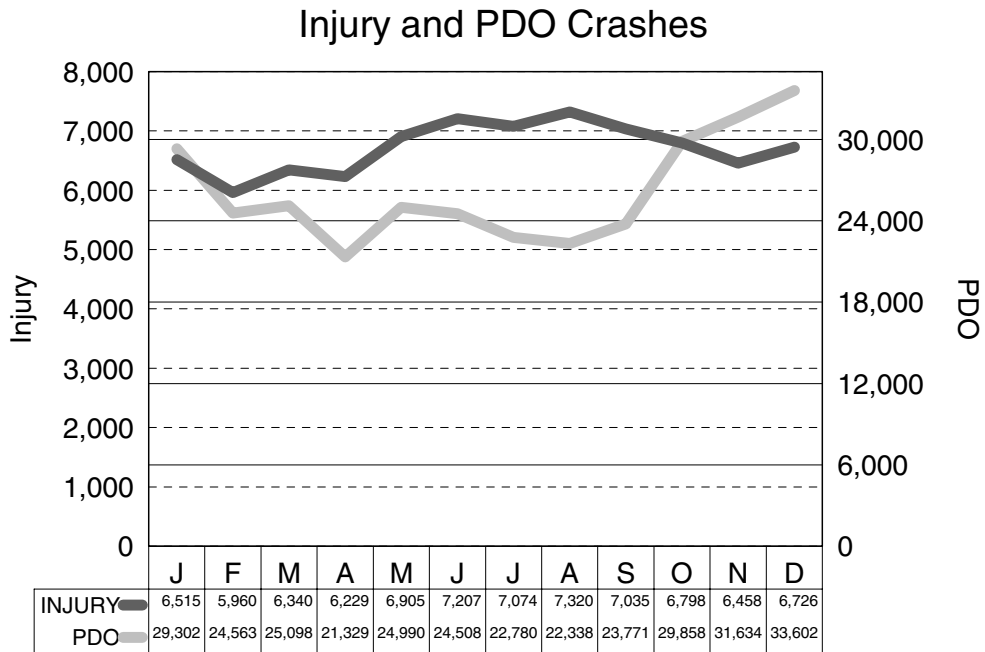
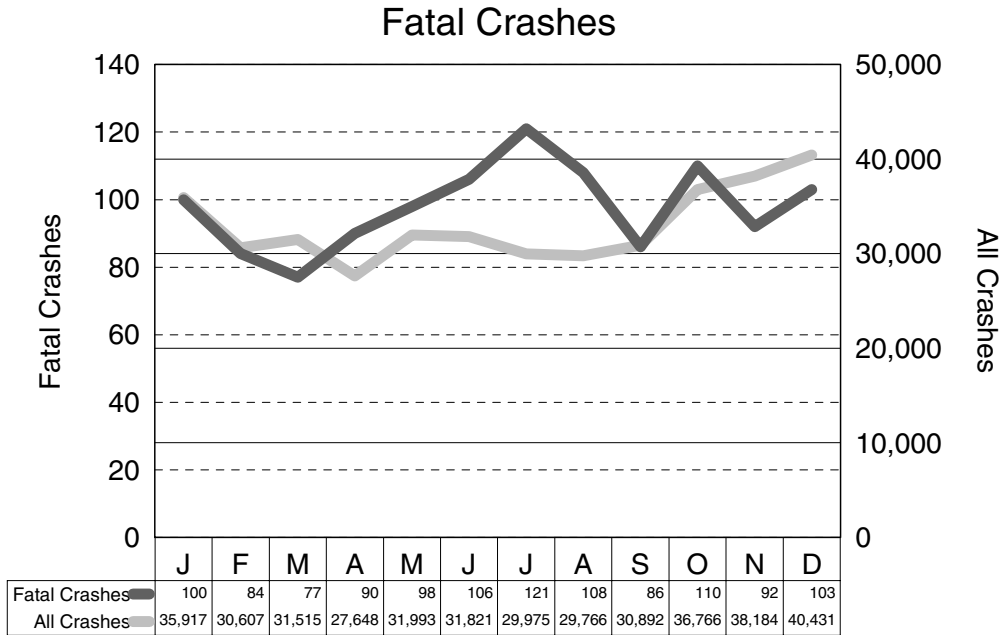
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Crash

ALL CRASHES INJURY SEVERITY BY MONTH



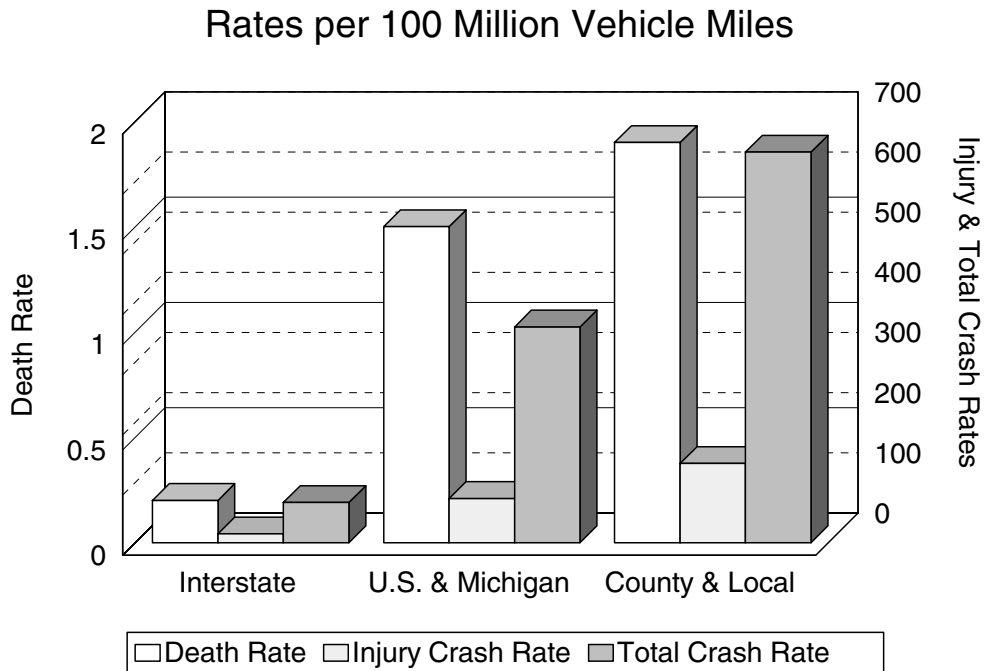
The charts on this page show that the months of April through September are peak months (21.9% or above) in terms of the percent of the number of crashes involving death or injury to the number of all crashes. That is, if a person was in a motor vehicle crash during one of these months there was a higher chance of that crash resulting in death or injury to one of the involved persons than if that crash happened during one of the other months.

CRASH EXPERIENCE BY ROADWAY TYPE

The table below provides a detailed breakdown of estimated vehicle mileage, crashes, death rates (deaths per 100 million vehicle miles), and crash rates (crashes per 100 million vehicle miles) for the major roadway types in Michigan. All rates are lowest on interstate routes. 2002 estimated mileage figures were provided by the Michigan Department of Transportation [10].

STATEWIDE	Estimated Mileage (Billions)	All Crashes	Injury Crashes	Deaths	Total Crash Rate	Injury Crash Rate	Death Rate
Interstate Routes	30.3	20,171	4,382	75	66.6	14.5	0.2
U.S. & Michigan Roads	22.5	80,631	16,517	329	358.4	73.4	1.5
County & City Roads	45.4	294,713	59,668	875	649.1	131.4	1.9
Totals	98.2	395,515	80,567	1,279	402.8	82.0	1.3

Please see foreword regarding roadway type classification issue.



CRASH TYPE

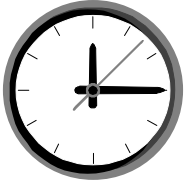
CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Single Vehicle	129,928	32.9	538	45.8	3,189	7,711	10,028	108,462
Head On	6,892	1.7	174	14.8	593	791	1,114	4,220
Head On - Left Turn	11,154	2.8	46	3.9	506	1,333	2,592	6,677
Angle	74,321	18.8	276	23.5	2,106	5,594	13,080	53,265
Rear End	96,330	24.4	57	4.9	952	3,293	18,226	73,802
Rear End - Left Turn	4,164	1.1	5	0.4	80	250	814	3,015
Rear End - Right Turn	3,225	0.8	0	0.0	24	79	431	2,691
Sideswipe - Same Direction	33,944	8.6	13	1.1	205	753	2,048	30,925
Sideswipe - Opposite Direct	10,065	2.5	19	1.6	125	385	686	8,850
Other/Unknown	25,492	6.4	47	4.0	466	1,081	2,032	21,866
Totals	395,515	100.0	1,175	100.0	8,246	21,270	51,051	313,773

Single Vehicle, Head On, and Angle crash types produce the highest number of fatal crashes (84.1%). Single Vehicle crashes include rollovers, which are particularly deadly crash types. Rear End-Turning and Sideswipe crashes produce the lowest number of fatal crashes (3.1%).

RELATIONSHIP TO ROADWAY

LOCATION OF FIRST IMPACT	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
On Road	332,159	84.0	799	68.0	5,723	15,471	43,070	267,096
Median	2,712	0.7	16	1.4	148	273	424	1,851
Shoulder	16,405	4.1	85	7.2	578	1,362	1,844	12,536
Outside of Shoulder/Curb	32,468	8.2	237	20.2	1,443	3,331	4,321	23,136
Gore	845	0.2	7	0.6	31	87	132	588
Other/Unknown	10,926	2.8	31	2.6	323	746	1,260	8,566
Totals	395,515	100.0	1,175	100.0	8,246	21,270	51,051	313,773

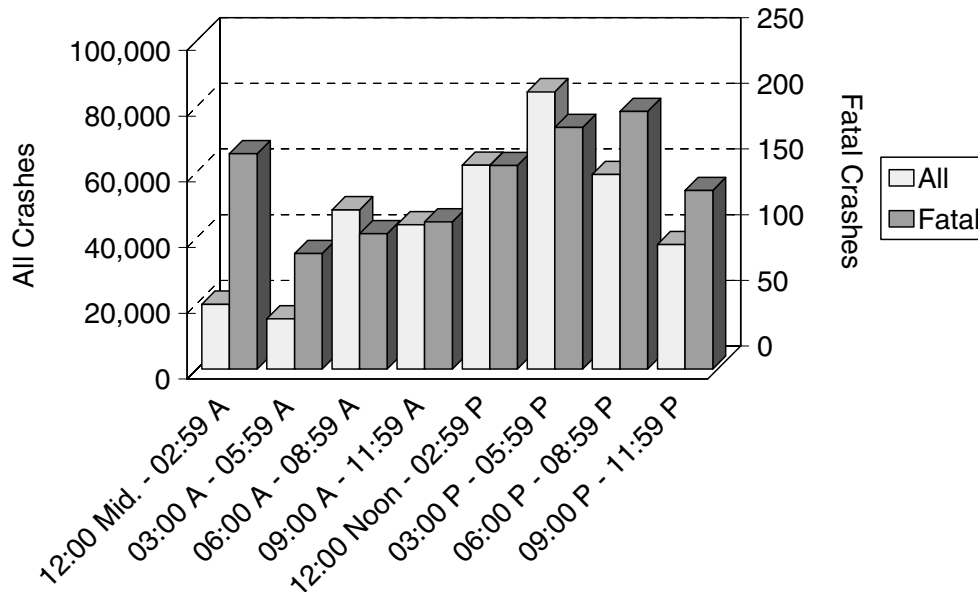
Crashes that happen outside of the normal driving lanes are overrepresented in the fatal count. Only 8.2 percent of crashes occur outside the shoulder of the road, but these crashes account for 20.2 percent of the fatal crashes.



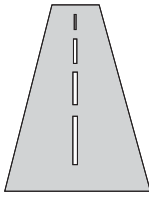
TIME AND SEVERITY

TIME OF DAY	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
12:00 mid. - 02:59 a.m.	19,753	5.0	164	14.0	782	1,597	2,022	15,188
03:00 a.m. - 05:59 a.m.	15,301	3.9	88	7.5	384	830	1,215	12,784
06:00 a.m. - 08:59 a.m.	48,481	12.3	103	8.8	816	2,035	5,708	39,819
09:00 a.m. - 11:59 a.m.	43,935	11.1	112	9.5	894	2,335	6,271	34,323
12:00 noon - 02:59 p.m.	62,078	15.7	155	13.2	1,281	3,528	9,638	47,476
03:00 p.m. - 05:59 p.m.	84,431	21.3	184	15.7	1,619	4,585	12,708	65,335
06:00 p.m. - 08:59 p.m.	59,223	15.0	196	16.7	1,216	3,156	6,730	47,925
09:00 p.m. - 11:59 p.m.	37,946	9.6	136	11.6	890	2,095	3,889	30,936
Unknown	24,367	6.2	37	3.1	364	1,109	2,870	19,987
Total	395,515	100.0	1,175	100.0	8,246	21,270	51,051	313,773

Time and Severity



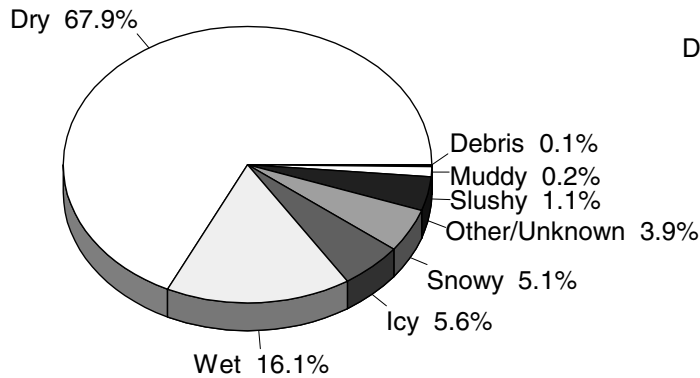
Crash frequencies peak in the late afternoon, then drop off steadily until 6:00 AM (the morning rush hour). Fatal crash frequencies rise with the frequency of other crashes, but continue at a high rate well into the early morning hours. There are proportionally more fatal crashes during the midnight to 2:59 AM time period.



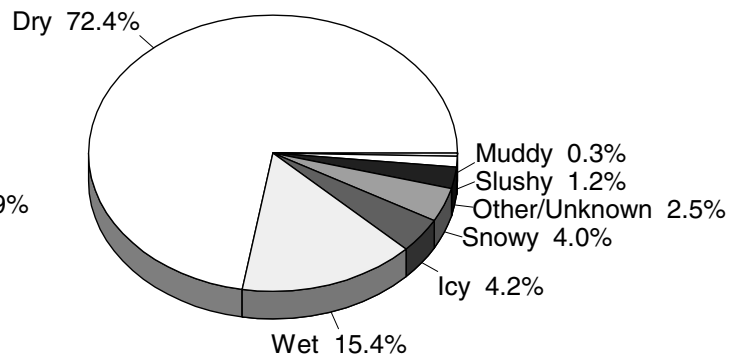
ROAD CONDITION

ROAD SURFACE CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Dry	268,710	67.9	851	72.4	5,999	15,039	34,460	212,361
Wet	63,560	16.1	181	15.4	1,111	3,187	9,605	49,476
Icy	22,092	5.6	49	4.2	408	1,158	2,673	17,804
Snowy	20,295	5.1	47	4.0	359	816	1,999	17,074
Muddy	650	0.2	4	0.3	27	55	61	503
Slushy	4,440	1.1	14	1.2	112	291	574	3,449
Debris	232	0.1	0	0.0	4	36	20	172
Other/Unknown	15,536	3.9	29	2.5	226	688	1,659	12,934
Totals	395,515	100.0	1,175	100.0	8,246	21,270	51,051	313,773

ALL CRASHES



FATAL CRASHES



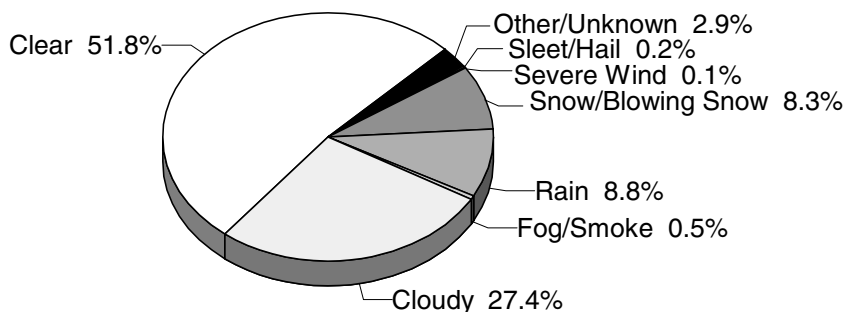
Most crashes (67.9%) and most fatal crashes (72.4%) occur on dry roads. This indicates that Michigan drivers do a good job of adjusting their driving behavior for bad road conditions.



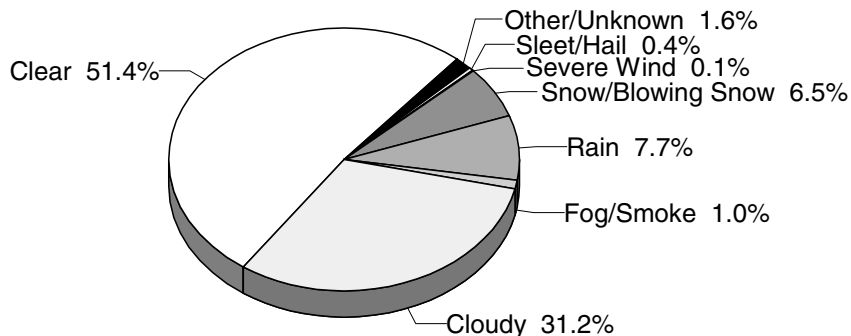
WEATHER CONDITION

WEATHER CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Clear	204,975	51.8	604	51.4	4,683	11,817	26,399	161,472
Cloudy	108,317	27.4	367	31.2	2,163	5,544	13,980	86,263
Fog/Smoke	2,011	0.5	12	1.0	61	102	177	1,659
Rain	34,640	8.8	91	7.7	599	1,803	5,438	26,709
Snow/Blowing Snow	33,024	8.3	76	6.5	572	1,551	3,921	26,904
Severe Wind	384	0.1	1	0.1	10	21	36	316
Sleet/Hail	882	0.2	5	0.4	17	45	114	701
Other/Unknown	11,282	2.9	19	1.6	141	387	986	9,749
Totals	395,515	100.0	1,175	100.0	8,246	21,270	51,051	313,773

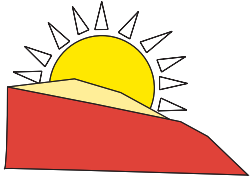
ALL CRASHES



FATAL CRASHES



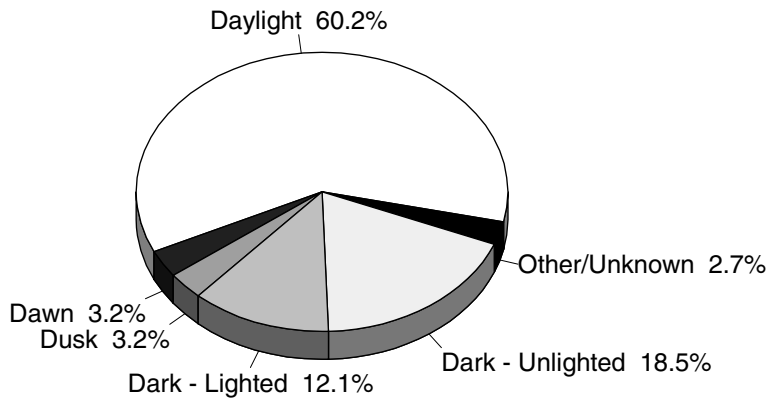
Half of all crashes occur in good weather (51.8%). Fog/smoke and sleet/hail are particularly deadly weather conditions as they are overrepresented in fatal crashes.



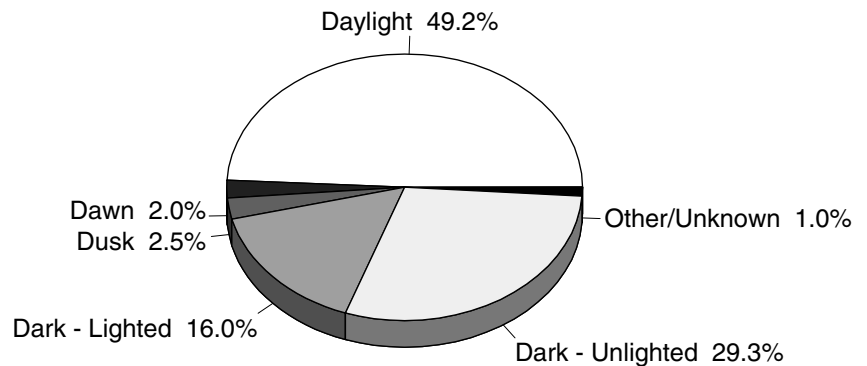
LIGHT CONDITION

LIGHT CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Daylight	238,285	60.2	578	49.2	4,903	13,442	35,622	183,740
Dawn	12,854	3.2	24	2.0	191	460	1,145	11,034
Dusk	12,764	3.2	29	2.5	253	638	1,426	10,418
Dark – Lighted	47,975	12.1	188	16.0	1,246	2,973	6,850	36,718
Dark – Unlighted	73,040	18.5	344	29.3	1,519	3,339	4,893	62,945
Other/Unknown	10,597	2.7	12	1.0	134	418	1,115	8,918
Totals	395,515	100.0	1,175	100.0	8,246	21,270	51,051	313,773

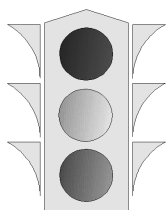
ALL CRASHES



FATAL CRASHES



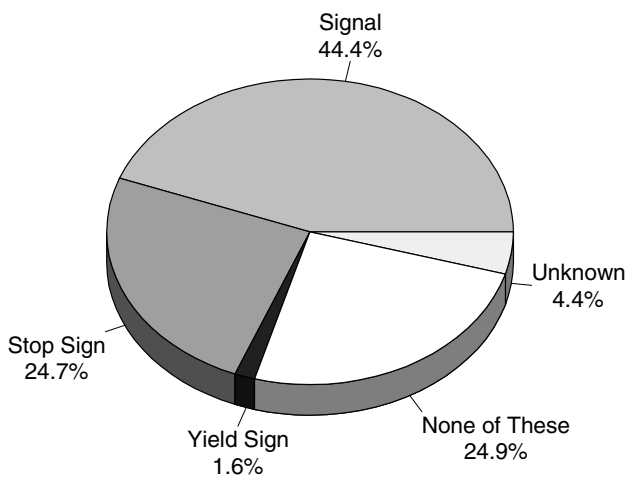
The majority (60.2%) of all crashes happen during daylight hours. Dark conditions create the greatest hazard, as they are overrepresented in fatal crashes. Areas without street lights have the higher fatality rate for dark conditions.



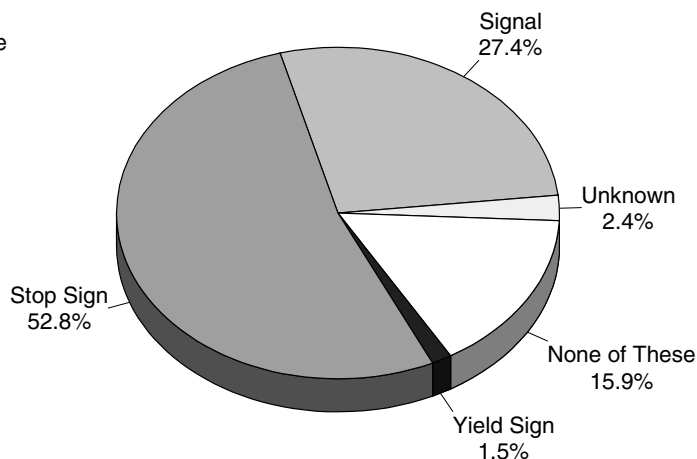
INTERSECTION CRASHES BY TRAFFIC CONTROL TYPE

TRAFFIC CONTROL TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Signal	54,300	44.4	93	27.4	1,118	3,204	10,642	39,243
Stop Sign	30,256	24.7	179	52.8	909	2,269	5,138	21,761
Yield Sign	1,975	1.6	5	1.5	54	156	431	1,329
None of These	30,489	24.9	54	15.9	633	1,868	4,689	23,245
Unknown	5,341	4.4	8	2.4	100	293	835	4,105
Totals	122,361	100.0	339	100.0	2,814	7,790	21,735	89,683

ALL CRASHES



FATAL CRASHES



Intersections with stop signs are overrepresented in fatal crashes. Driver perception, awareness, and adherence to traffic control signing are all key factors in crashes at intersections.



CONSTRUCTION ZONE CRASHES

CONSTRUCTION ZONE TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Subtotal	Number	% of Subtotal	A	B	C	
Construction/Maintenance								
Activity - On Road								
Lane Closed	3,096	49.5	6	37.5	48	110	443	2,489
Lane Open	853	13.6	1	6.3	16	38	115	683
Unknown Lane Closure	168	2.7	0	0.0	3	2	17	146
Activity - Off Road								
Lane Closed	346	5.5	1	6.3	6	13	47	279
Lane Open	393	6.3	1	6.3	9	16	57	310
Unknown Lane Closure	26	0.4	0	0.0	0	0	2	24
Activity - None								
Lane Closed	623	10.0	1	6.3	10	30	94	488
Lane Open	389	6.2	4	25.0	7	22	46	310
Unknown Lane Closure	24	0.4	0	0.0	2	3	4	15
Activity ñ Unknown								
Lane Closed	135	2.2	2	12.5	0	7	20	106
Lane Open	49	0.8	0	0.0	1	2	8	38
Unknown Lane Closure	158	2.5	0	0.0	0	1	22	135
Subtotal	6,260	100.0	16	100.0	102	244	875	5,023
Utility								
Activity - On Road								
Lane Closed	103	32.7	0	0.0	2	4	16	81
Lane Open	81	25.7	1	50.0	6	4	11	59
Unknown Lane Closure	7	2.2	0	0.0	0	0	0	7
Activity - Off Road								
Lane Closed	25	7.9	0	0.0	1	2	5	17
Lane Open	43	13.7	1	50.0	1	7	8	26
Unknown Lane Closure	3	1.0	0	0.0	0	0	0	3
Activity - None								
Lane Closed	4	1.3	0	0.0	0	0	1	3
Lane Open	33	10.5	0	0.0	0	0	5	28
Unknown Lane Closure	1	0.3	0	0.0	0	0	1	0
Activity - Unknown								
Lane Closed	2	0.6	0	0.0	1	0	0	1
Lane Open	1	0.3	0	0.0	0	0	0	1
Unknown Lane Closure	12	3.8	0	0.0	0	0	1	11
Subtotal	315	100.0	2	100.0	11	17	48	237
Unknown Type								
Subtotal	14,460		38		372	815	1,858	11,377
Total	21,035		56		485	1,076	2,781	16,637