

## Rural Two-Way Two-Lane Segment Proportions

**Table 10-3: Distribution for Crash Severity Level on Rural Two-Lane Two-Way Roadway Segments plus Locally-Derived Values**

Crash severity level	Percentage of total roadway segment crashes	
	Locally-Derived Values? Yes	Locally-Derived Values (Ohio)
Fatal	1.3	0.8
Incapacitating Injury	5.4	4.3
Nonincapacitating Injury	10.9	13.7
Possible Injury	14.5	6.7
Total Fatal Plus Injury	32.1	25.5
Property Damage Only	67.9	74.5
TOTAL	100.0	100.0

Note: HSM-provided crash severity data based on HSIS data for Washington (2002-2006)

**Table 10-4: Default Distribution by Collision Type for Specific Crash Severity Levels on Rural Two-Lane Two-Way Roadway Segments plus Locally-Derived Values**

Collision type	Locally-Derived Values? Yes	Percentage of total roadway segment crashes by crash severity level					
		HSM-Provided Values			Locally-Derived Values (Ohio)		
		Total fatal and injury	Property damage only	TOTAL (all severity levels combined)	Total fatal and injury	Property damage only	TOTAL (all severity levels combined)
<b>SINGLE-VEHICLE CRASHES</b>							
Collision with animal		3.8	18.4	12.1	7.15	52.34	40.82
Collision with bicycle		0.4	0.1	0.2	0.58	0.00	0.15
Collision with pedestrian		0.7	0.1	0.3	0.90	0.03	0.25
Overturned		3.7	1.5	2.5	6.04	1.23	2.46
Ran off road		54.5	50.5	52.1	46.60	26.37	31.53
Other single-vehicle crash		0.7	2.9	2.1	1.70	2.91	2.60
Total single-vehicle crashes		63.8	73.5	69.3	62.97	82.88	77.81
<b>MULTIPLE-VEHICLE CRASHES</b>							
Angle collision		10.0	7.2	8.5	6.96	2.93	3.96
Head-on collision		3.4	0.3	1.6	1.78	0.09	0.52
Rear-end collision		16.4	12.2	14.2	16.47	7.69	9.93
Sideswipe collision		3.8	3.8	3.7	11.18	5.44	6.90
Other multiple-vehicle collision		2.6	3.0	2.7	0.64	0.97	0.89
Total multiple-vehicle crashes		36.2	26.5	30.7	37.03	17.12	22.20
TOTAL CRASHES		100.0	100.0	100.0	100.00	100.00	100.01

Note: HSM-provided values based on crash data for Washington (2002-2006); includes approximately 70 percent opposite-direction sideswipe and 30 percent same-direction sideswipe collisions.

**Table 10-12: Nighttime Crash Proportions for Unlighted Roadway Segments plus Locally-Derived Values**

Roadway Type	HSM-Provided Values			Locally-Derived Values (Ohio)		
	Locally-Derived Values? Yes	Proportion of total nighttime crashes by severity level		Proportion of total nighttime crashes by severity level		Proportion of crashes that occur at night
		Fatal and Injury $p_{nr}$	PDO $p_{pnr}$	Fatal and Injury $p_{nr}$	PDO $p_{pnr}$	$p_{nr}$
2U	0.382	0.618	0.370	0.201	0.799	0.018

## Rural Two-Way Two-Lane Intersection Proportions

**Table 10-5: Default Distribution for Crash Severity Level at Rural Two-Lane Two-Way Intersections plus Locally-Derived Values**

Collision type	Percentage of total crashes					
	HSM-Provided Values			Locally-Derived Values (Ohio)		
	3ST	4ST	4SG	3ST	4ST	4SG
Locally-Derived Values	No					
Fatal	1.7	1.8	0.9	0.57	0.97	0.16
Incapacitating injury	4.0	4.3	2.1	4.82	6.32	2.18
Nonincapacitating injury	16.6	16.2	10.5	15.64	17.68	9.95
Possible injury	19.2	20.8	20.5	11.38	11.77	12.57
Total fatal plus injury	41.5	43.1	34.0	32.4	36.7	24.9
Property damage only	58.5	56.9	66.0	67.6	63.3	75.1
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Note: HSM-Provided values based on HSIS data for California (2002-2006)

**Table 10-6: Default Distribution for Collision Type and Manner of Collision at Rural Two-Way Intersections plus Locally-Derived Values**

Collision type	Percentage of total crashes by collision type (HSM Default Values)									Percentage of total crashes by collision type (Locally Derived Values) (Ohio)								
	Three-leg stop-controlled intersections			Four-leg stop-controlled intersections			Four-leg signalized intersections			Three-leg stop-controlled intersections			Four-leg stop-controlled intersections			Four-leg signalized intersections		
	Fatal and injury	Property damage only	Total	Fatal and injury	Property damage only	Total	Fatal and injury	Property damage only	Total	Fatal and injury	Property damage only	Total	Fatal and injury	Property damage only	Total	Fatal and injury	Property damage only	Total
Locally-Derived Values	No																	
<b>SINGLE-VEHICLE CRASHES</b>									<b>SINGLE-VEHICLE CRASHES</b>									
Collision with animal	0.8	2.6	1.9	0.6	1.4	1.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Collision with bicycle	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.4	0.1	0.6	0.7	0.2	0.4	1.8	0.2	0.6
Collision with pedestrian	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.5	0.2	0.6	1.1	0.1	0.5	3.2	0.2	0.9
Overturned	2.2	0.7	1.3	0.6	0.4	0.5	0.3	0.3	0.3	4.0	1.0	2.0	1.7	0.6	1.0	0.9	0.2	0.4
Ran off road	24.0	24.7	24.4	9.4	14.4	12.2	3.2	8.1	6.4	30.9	31.2	31.1	13.2	19.8	17.4	6.2	6.7	6.6
Other single-vehicle crash	1.1	2.0	1.6	0.4	1.0	0.8	0.3	1.8	0.5	2.6	7.5	5.9	2.0	7.2	5.3	1.9	5.3	4.4
Total single-vehicle crashes	28.3	30.2	29.4	11.2	17.4	14.7	4.0	10.7	7.6	40.4	40.0	40.1	18.8	27.9	24.5	13.9	12.6	12.9
<b>MULTIPLE-VEHICLE CRASHES</b>									<b>MULTIPLE-VEHICLE CRASHES</b>									
Angle collision	27.5	21.0	23.7	53.2	35.4	43.1	33.6	24.2	27.4	17.8	15.6	16.3	55.0	34.1	41.8	38.6	25.3	28.6
Head-on collision	8.1	3.2	5.2	6.0	2.5	4.0	8.0	4.0	5.4	2.2	0.6	1.1	1.5	0.5	0.9	1.4	0.5	0.7
Rear-end collision	26.0	29.2	27.8	21.0	26.6	24.2	40.3	43.8	42.6	29.9	30.2	30.1	18.1	23.3	21.4	40.9	45.1	44.1
Sideswipe collision	5.1	13.1	9.7	4.4	14.4	10.1	5.1	15.3	11.8	9.2	9.0	9.1	6.0	8.3	7.4	4.7	10.3	8.9
Other multiple-vehicle collision	5.0	3.3	4.2	4.2	3.7	3.9	9.0	2.0	5.2	0.6	4.6	3.3	0.6	6.0	4.0	0.5	6.2	4.8
Total multiple-vehicle crashes	71.7	69.8	70.6	88.8	82.6	85.3	96.0	89.3	92.4	59.6	60.0	59.9	81.2	72.1	75.5	86.1	87.4	87.1
TOTAL CRASHES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: HSM-Provided values based on HSIS data for California (2002-2006)

**Table 10-15: Nighttime Crash Proportions for Unlighted Intersections**

Intersection Type	Proportion of crashes that occur at night, p <sub>ni</sub>	
Locally-Derived Values	No	
3ST	HSM Provided Values	Locally-Derived Values (C)
	0.260	0.0013
4ST	0.244	0.0011
4SG	0.286	0.0002

Note: HSM-Provided values based on HSIS data for California (2002-2006)

**Table 11-4: Distribution of Crashes by Collision Type and Crash Severity Level for Undivided Roadway Segments**

Collision type		Proportion of crashes by collision type and crash severity level							
		HSM-Provided Values				Locally-Derived Values (Ohio)			
Locally-Derived Values?	Yes	Total	Fatal and injury	Fatal and injury <sup>a</sup>	PDO	Total	Fatal and injury	Fatal and injury <sup>a</sup>	PDO
		0.009	0.029	0.043	0.001	0.009	0.022	0.019	0.004
		0.098	0.048	0.044	0.120	0.027	0.104	0.073	0.129
		0.246	0.305	0.217	0.220	0.096	0.369	0.199	0.228
		0.356	0.352	0.348	0.358	0.064	0.247	0.151	0.148
		0.238	0.238	0.304	0.237	0.061	0.230	0.173	0.448
		0.053	0.028	0.044	0.064	0.74	0.029	0.385	0.044
SV run-off-rd, Head-on, Sideswipe		0.270				0.261			

NOTE: <sup>a</sup> Using the KABCO scale, these include only KAB crashes. Crashes with severity level C (possible injury) are not included.

**Table 11-6: Distribution of Crashes by Collision Type and Crash Severity Level for Divided Roadway Segments**

Collision type		Proportion of crashes by collision type and crash severity level							
		HSM-Provided Values				Locally-Derived Values (Ohio)			
Locally-Derived Values?	Yes	Total	Fatal and injury	Fatal and injury <sup>a</sup>	PDO	Total	Fatal and injury	Fatal and injury <sup>a</sup>	PDO
		0.006	0.013	0.018	0.002	0.004	0.002	0.002	0.000
		0.043	0.027	0.022	0.053	0.072	0.088	0.058	0.068
		0.116	0.163	0.114	0.088	0.101	0.216	0.123	0.075
		0.043	0.048	0.045	0.041	0.036	0.095	0.074	0.023
		0.768	0.727	0.778	0.792	0.748	0.567	0.434	0.788
		0.024	0.022	0.023	0.024	0.039	0.033	0.309	0.046
SV run-off-rd, Head-on, Sideswipe		0.500				0.279			

NOTE: <sup>a</sup> Using the KABCO scale, these include only KAB crashes. Crashes with severity level C (possible injury) are not included.

**Table 11-15: Night-time Crash Proportions for Unlighted Roadway Segments**

Roadway Type		HSM-Provided Values			Locally-Derived Values (Ohio)		
		Proportion of total night-time crashes by severity level		Proportion of crashes that occur at night	Proportion of total night-time crashes by severity level		Proportion of crashes that occur at night
Locally-Derived Values?	Yes	Fatal and injury, p <sub>inr</sub>	PDO, p <sub>pnr</sub>	p <sub>nr</sub>	Fatal and injury, p <sub>inr</sub>	PDO, p <sub>pnr</sub>	p <sub>nr</sub>
		0.361	0.639	0.255	0.227	0.773	0.079

**Table 11-19: Night-time Crash Proportions for Unlighted Roadway Segments**

Roadway Type		HSM-Provided Values			Locally-Derived Values (Ohio)		
		Proportion of total night-time crashes by severity level		Proportion of crashes that occur at night	Proportion of total night-time crashes by severity level		Proportion of crashes that occur at night
Locally-Derived Values?	Yes	Fatal and injury, p <sub>inr</sub>	PDO, p <sub>pnr</sub>	p <sub>nr</sub>	Fatal and injury, p <sub>inr</sub>	PDO, p <sub>pnr</sub>	p <sub>nr</sub>
		0.323	0.677	0.426	0.288	0.712	0.027

## Rural Multilane Intersection Proportions

**Table 11-9: Distribution of Intersection Crashes by Collision Type and Crash Severity**

Collision type		Proportion of crashes by collision type and crash severity level							
		HSM-Provided Values				Locally-Derived Values (Ohio)			
Locally-Derived Values?	No	Total	Fatal and injury	Fatal and injury <sup>a</sup>	PDO	Total	Fatal and injury	Fatal and injury <sup>a</sup>	PDO
<b>Three-leg intersections with minor road stop control</b>									
	Head-on	0.029	0.043	0.052	0.020	0.0074	0.0147	0.0177	0.0046
	Sideswipe	0.133	0.058	0.057	0.179	0.1541	0.0931	0.0896	0.1778
	Rear-end	0.289	0.247	0.142	0.315	0.2999	0.3130	0.2119	0.2948
	Angle	0.263	0.369	0.381	0.198	0.2574	0.3241	0.3531	0.2316
	Single	0.234	0.219	0.284	0.244	0.1488	0.2226	0.2947	0.1202
	Other	0.052	0.064	0.084	0.044	0.1324	0.0325	0.0330	0.1710
	SV run-off-rd, Head-on, Sideswipe	0.500				0.2782			
<b>Four-leg intersections with minor road stop control</b>									
	Head-on	0.016	0.018	0.023	0.015	0.0048	0.0116	0.0134	0.0018
	Sideswipe	0.107	0.042	0.040	0.156	0.1260	0.0717	0.0631	0.1498
	Rear-end	0.228	0.213	0.108	0.240	0.2678	0.2323	0.1436	0.2833
	Angle	0.395	0.534	0.571	0.292	0.3460	0.4903	0.5566	0.2828
	Single	0.202	0.148	0.199	0.243	0.1650	0.1676	0.1977	0.1639
	Other	0.052	0.045	0.059	0.054	0.0904	0.0265	0.0256	0.1184
	SV run-off-rd, Head-on, Sideswipe	0.500				0.2675			
<b>Four-leg signalized intersections</b>									
	Head-on	0.054	0.083	0.093	0.034	0.0056	0.0101	0.0123	0.0039
	Sideswipe	0.106	0.047	0.039	0.147	0.1358	0.0639	0.0582	0.1619
	Rear-end	0.492	0.472	0.314	0.505	0.4145	0.3988	0.2754	0.4202
	Angle	0.256	0.315	0.407	0.215	0.2921	0.3920	0.4708	0.2558
	Single	0.062	0.041	0.078	0.077	0.0722	0.1134	0.1650	0.0572
	Other	0.030	0.042	0.069	0.022	0.0798	0.0218	0.0182	0.1010
	SV run-off-rd, Head-on, Sideswipe	0.500				0.2741			

NOTE: <sup>a</sup> Using the KABCO scale, these include only KAB crashes. Crashes with severity level C (possible injury) are not included.

**Table 11-24: Night-time Crash Proportions for Unlighted Intersections**

Roadway Type		HSM-Provided Values			Locally-Derived Values (Ohio)		
		Proportion of total night-time crashes by severity level		Proportion of crashes that occur at night	Proportion of total night-time crashes by severity level		Proportion of crashes that occur at night
Locally-Derived Values?	No	Fatal and injury, $p_{ni}$	PDO, $p_{pnr}$	$p_{ni}$	Fatal and injury, $p_{inr}$	PDO, $p_{pnr}$	$p_{nr}$
	3ST			0.276	0.0000	1.0000	0.0006
	4ST			0.273	0.0000	1.0000	0.0002

## Urban and Suburban Arterial Segment Proportions

**Table 12-4: Distribution of Multiple-Vehicle Nondrivable Collisions for Roadway Segments by Manner of Collision Type**

Locally-Derived Values?	No	Proportion of crashes by severity level for specific road types									
		HSM-Provided Values									
		2U		3T		4U		4D		5T	
Collision type	FI	PDO	FI	PDO	FI	PDO	FI	PDO	FI	PDO	
Rear-end collision	0.730	0.778	0.845	0.842	0.511	0.506	0.832	0.662	0.846	0.651	
Head-on collision	0.068	0.004	0.034	0.020	0.077	0.004	0.020	0.007	0.021	0.004	
Angle collision	0.085	0.079	0.069	0.020	0.181	0.130	0.040	0.036	0.050	0.059	
Sideswipe, same direction	0.015	0.031	0.001	0.078	0.093	0.249	0.050	0.223	0.061	0.248	
Sideswipe, opposite direction	0.073	0.055	0.017	0.020	0.082	0.031	0.010	0.001	0.004	0.009	
Other multiple-vehicle collision	0.029	0.053	0.034	0.020	0.056	0.080	0.048	0.071	0.018	0.029	
Source: HGIS data for Washington (2002-2006)											
Collision type	Locally-Derived Values (Ohio)										
	2U		3T		4U		4D		5T		
	FI	PDO	FI	PDO	FI	PDO	FI	PDO	FI	PDO	
Rear-end collision	0.661	0.704	0.714	0.734	0.425	0.520	0.780	0.644	0.686	0.629	
Head-on collision	0.038	0.005	0.056	0.000	0.018	0.005	0.000	0.000	0.025	0.003	
Angle collision	0.105	0.103	0.082	0.119	0.239	0.165	0.099	0.110	0.191	0.127	
Sideswipe, same direction	0.041	0.092	0.046	0.080	0.133	0.200	0.099	0.219	0.067	0.202	
Sideswipe, opposite direction	0.150	0.076	0.102	0.049	0.177	0.080	0.023	0.007	0.030	0.023	
Other multiple-vehicle collision	0.005	0.020	0.000	0.018	0.009	0.030	0.000	0.020	0.001	0.017	

Note: HSM-Provided values based on HGIS data for Washington (2002-2006)

**Table 12-6: Distribution of Single-Vehicle Collisions for Roadway Segments by Collision Type**

Locally-Derived Values?	No	Proportion of crashes by severity level for specific road types									
		HSM-Provided Values									
		2U		3T		4U		4D		5T	
Collision type	FI	PDO	FI	PDO	FI	PDO	FI	PDO	FI	PDO	
Collision with animal	0.026	0.066	0.001	0.001	0.001	0.001	0.001	0.063	0.016	0.049	
Collision with fixed object	0.723	0.759	0.688	0.963	0.612	0.809	0.500	0.813	0.398	0.768	
Collision with other object	0.010	0.013	0.001	0.001	0.020	0.029	0.028	0.016	0.005	0.061	
Other single-vehicle collision	0.241	0.162	0.310	0.035	0.367	0.161	0.471	0.108	0.581	0.122	
Source: HGIS data for Washington (2002-2006)											
Collision type	Locally-Derived Values (Ohio)										
	2U		3T		4U		4D		5T		
	FI	PDO	FI	PDO	FI	PDO	FI	PDO	FI	PDO	
Collision with animal	0.099	0.667	0.118	0.712	0.107	0.583	0.200	0.659	0.174	0.645	
Collision with fixed object	0.338	0.258	0.686	0.191	0.643	0.264	0.648	0.234	0.540	0.208	
Collision with other object	0.015	0.012	0.039	0.019	0.000	0.028	0.008	0.029	0.012	0.030	
Other single-vehicle collision	0.548	0.063	0.157	0.078	0.250	0.125	0.144	0.078	0.274	0.117	

## Urban and Suburban Arterial Segment Proportions

**Table 12-8: Pedestrian Crash Adjustment Factor for Roadway Segments**

Locally-Derived Values?	No	Pedestrian Crash Adjustment Factor ( $f_{pedr}$ )			
		HSM-Provided Values		Locally-Derived Values (Ohio)	
		Posted Speed 30 mph or Lower	Posted Speed Greater than 30 mph	Posted Speed 30 mph or Lower	Posted Speed Greater than 30 mph
Road type					
2U		0.036	0.005	0.0003	0.0022
3T		0.041	0.013	0.0000	0.0043
4U		0.022	0.009	0.0000	0.0029
4D		0.067	0.019	0.0000	0.0019
5T		0.030	0.023	0.0002	0.0044

Note: These factors apply to the methodology for predicting total crashes (all severity levels combined). All pedestrian collisions resulting from this adjustment factor are treated as fatal-and-injury crashes and none as property-damage-only crashes. Source: HGIS data for Washington (2002-2006)

**Table 12-9: Bicycle Crash Adjustment Factor for Roadway Segments**

Locally-Derived Values?	No	Bicycle Crash Adjustment Factor ( $f_{biker}$ )			
		HSM-Provided Values		Locally-Derived Values (Ohio)	
		Posted Speed 30 mph or Lower	Posted Speed Greater than 30 mph	Posted Speed 30 mph or Lower	Posted Speed Greater than 30 mph
Road type					
2U		0.018	0.004	0.0000	0.0025
3T		0.027	0.007	0.0000	0.0043
4U		0.011	0.002	0.0000	0.0059
4D		0.013	0.005	0.0000	0.0019
5T		0.050	0.012	0.0002	0.0044

Note: These factors apply to the methodology for predicting total crashes (all severity levels combined). All bicycle collisions resulting from this adjustment factor are treated as fatal-and-injury crashes and none as property-damage-only crashes. Source: HGIS data for Washington (2002-2006)

**Table 12-21: Proportion of Fixed-Object Collisions**

Road Type		HSM-Provided Values	Locally-Derived Values (Ohio)
Locally-Derived Values?	No	Proportion of Fixed-Object Collisions ( $p_{fo}$ )	Proportion of Fixed-Object Collisions ( $p_{fo}$ )
		0.059	0.175
		0.034	0.092
		0.037	0.175
		0.036	0.140
		0.016	0.056

**Table 12-23: Nighttime Crash Proportions for Unlighted Roadway Segments**

Road Type		HSM-Provided Values			Locally-Derived Values (Ohio)		
Locally-Derived Values?	No	Proportion of Total Nighttime Crashes by Severity Level		Proportion of Crashes that Occur at Night	Proportion of Total Nighttime Crashes by Severity Level		Proportion of Crashes that Occur at Night
		Fatal and Injury ( $p_{fir}$ )	PDO ( $p_{pnr}$ )	( $p_{nr}$ )	Fatal and Injury ( $p_{fir}$ )	PDO ( $p_{pnr}$ )	( $p_{nr}$ )
		0.424	0.576	0.316	0.218	0.782	0.172
		0.429	0.571	0.304	0.264	0.736	0.166
		0.517	0.483	0.365	0.274	0.726	0.233
		0.364	0.636	0.410	0.189	0.811	0.169
		0.432	0.568	0.274	0.602	0.398	0.078

## Urban and Suburban Arterial Intersection Proportions

**Table 12-11: Distribution of Multiple-Vehicle Collisions for Intersections by Collision Type**

Locally-Derived Values?	No	Proportion of crashes by severity level for specific intersection types							
		HSM-Provided Values							
		3ST		3SG		4ST		4SG	
Collision type	FI	PDO	FI	PDO	FI	PDO	FI	PDO	
Rear-end collision	0.421	0.440	0.549	0.546	0.338	0.374	0.450	0.483	
Head-on collision	0.045	0.023	0.038	0.020	0.041	0.030	0.049	0.030	
Angle collision	0.343	0.262	0.280	0.204	0.440	0.335	0.347	0.244	
Sideswipe	0.126	0.040	0.076	0.032	0.121	0.044	0.099	0.032	
Other multiple-vehicle collision	0.065	0.235	0.057	0.198	0.060	0.217	0.055	0.211	

Source: HSIS data for Washington (2002-2006)

Collision type	Locally-Derived Values (Ohio)							
	3ST		3SG		4ST		4SG	
	FI	PDO	FI	PDO	FI	PDO	FI	PDO
Rear-end collision	0.2082	0.4823	0.4763	0.4606	0.4227	0.4397	0.4943	0.5313
Head-on collision	0.3576	0.0053	0.0144	0.0049	0.0138	0.0047	0.0133	0.0044
Angle collision	0.1882	0.2498	0.3865	0.2458	0.3136	0.3136	0.4128	0.2656
Sideswipe	0.2298	0.2114	0.1147	0.2471	0.1962	0.1962	0.0754	0.1642
Other multiple-vehicle collision	0.0162	0.0512	0.0081	0.0416	0.0537	0.0458	0.0042	0.0345

Note: HSM-Provided values based on HSIS data for California (2002-2006)

**Table 12-13: Distribution of Single-Vehicle Crashes for Intersections by Collision Type**

Locally-Derived Values?	No	Proportion of crashes by severity level for specific intersection types							
		HSM-Provided Values							
		3ST		3SG		4ST		4SG	
Collision type	FI	PDO	FI	PDO	FI	PDO	FI	PDO	
Collision with parked vehicle	0.001	0.003	0.001	0.001	0.001	0.001	0.001	0.001	
Collision with animal	0.003	0.018	0.001	0.003	0.001	0.026	0.002	0.002	
Collision with fixed object	0.762	0.834	0.653	0.895	0.679	0.847	0.744	0.870	
Collision with other object	0.090	0.092	0.091	0.069	0.089	0.070	0.072	0.070	
Other single-vehicle collision	0.039	0.023	0.045	0.018	0.051	0.007	0.040	0.023	
Noncollision	0.105	0.030	0.209	0.014	0.179	0.049	0.141	0.034	

Source: HSM-Provided values base on HSIS data for California (2002-2006)

Collision type	Locally-Derived Values (Ohio)							
	3ST		3SG		4ST		4SG	
	FI	PDO	FI	PDO	FI	PDO	FI	PDO
Collision with parked vehicle	0.0177	0.3899	0.1283	0.4275	0.1458	0.3363	0.2154	0.3757
Collision with animal	0.0270	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Collision with fixed object	0.1298	0.5223	0.7257	0.4874	0.7023	0.5554	0.6110	0.5095
Collision with other object	0.1256	0.0278	0.0177	0.0242	0.0083	0.0263	0.0139	0.0209
Other single-vehicle collision	0.6937	0.0138	0.0531	0.0126	0.0923	0.0181	0.0942	0.0203
Noncollision	0.0062	0.0462	0.0752	0.0483	0.0513	0.0639	0.0655	0.0736

**Table 12-27: Nighttime Crash Proportions for Unlighted Intersections**

Locally-Derived Values?	No	Proportion of crashes that occur at night, $p_{ni}$	
		HSM-Provided Values	Locally-Derived Values (Ohio)
Intersection Type			
3ST		0.238	0.0002
4ST		0.229	0.0002
3SG		0.235	0.0007
4SG		0.235	0.0003