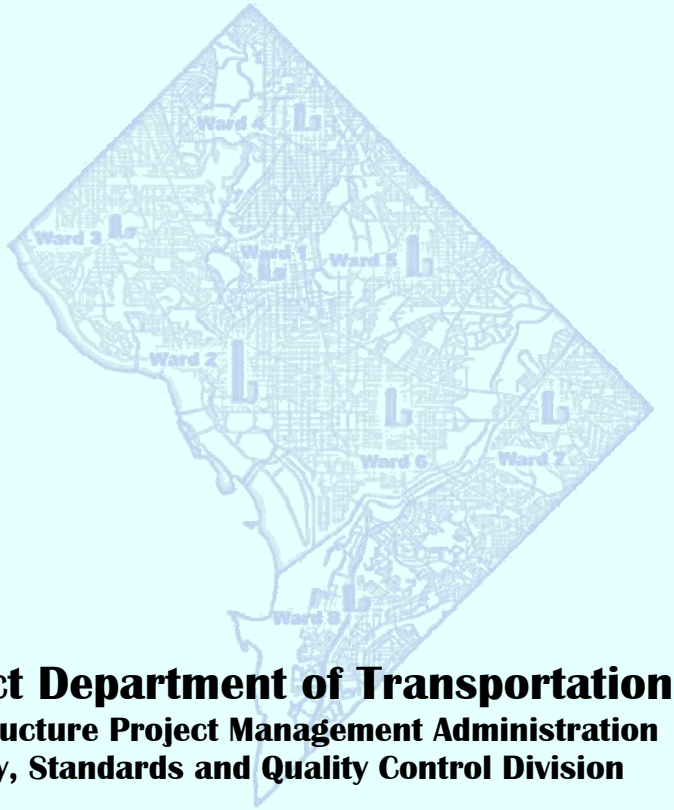
TRAFFIC SAFETY REPORT STATISTICS

(2007~2009)



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10. Abstract

The objective of this traffic safety report is to provide valuable information concerning the various factors involved in all traffic crashes in Washington, D.C. from 2007 to 2009. This information focuses on locations, collisions types, vehicle classifications, severity, date and time, pedestrians, age groups, and all other pertinent information available. The high hazard crash location analysis utilizes these data including crash frequency, rate and severity. A comprehensive ranking list and trends of selected high hazard crash intersections and corridors is provided in this report. This information is crucial for identifying traffic safety issues and developing effective counter measures.

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CHAPTER 1 INTRODUCTION

This report published by the District of Columbia Department of Transportation (DDOT) is to provide traffic crash statistics and information on the high traffic frequency crash locations for the years 2007 through 2009. This report provides detailed causation analyses and a broad overview of traffic crash conditions in the District of Columbia through the target years.

All crash statistics, trend analyses, tables and graphics in this report are produced from the Traffic Crash Reports (PD-10) obtained from the Metropolitan Police Department (MPD). Over 16,000 PD-10s are entered and/or transferred each year and maintained in the DDOT Traffic Accident Reporting and Analysis System (TARAS).

The objective of this effort is to analyze the contributory factors and causal effects of the accidents so that countermeasures can be developed to mitigate the problems. The District of Columbia's Strategic Highway Safety Plan (SHSP) has a goal of reducing traffic fatalities 50% by 2025 or 2.5% each year for the next 15 years. The 2007 to 2009 number of accidents, injuries and fatalities show a continued reduction and is consistent with the national trend.

In an effort to improve traffic reporting procedure in the District, MPD recently adopted a new PD-10 form. The new form contains more data fields. The 2007 to 2009 reporting period encompasses a transition from the old PD-10 to the new form. Efforts had been made to reduce the effects to the minimum.

This report includes six Chapters. Chapter 2 provides a quick overview of the three years accident conditions, trends and summaries in the District of Columbia and a comparison with previous years. Chapter 3 presents the characteristics of accidents by time, location, type of collision, driver characteristics and environmental factors that contributed to the accidents. Chapter 4 includes different High Accident Location (HAL) listings by frequency, rate, cost, delta-change and also by the composite index. Chapter 5 consists of exposure data, including vehicle miles traveled, fatality rate, and injury rate per 100 million vehicle miles traveled (VMT). Chapter 6 includes appendices gathering all the accident listings, reporting forms and data coding sheets for reference. All information present in this report maintains consistent formats with previous reports to allow for comparisons.

CHAPTER 2 CRASH QUICK FACTS AND TREND

2.1 2009 DC Crash Quick Facts

Presented in Table 2.1 is a summary of crashes recorded in Washington, DC.

Table 2.1 2009 DC Crash Quick Facts

	2007	2008	2009
Total Collisions	15,106	16,147	16,841
Fatal Collisions	46	37	32
Injury Collisions	4,071	4,578	4,676
Property Damage Only (PDO) Collisions	10,989	11,532	12,133
Fatalities	54	39	33
Total Non-Fatal Injuries	6,571	6,792	6,529
Disabling Injuries*	363	306	347
Non-Disabling Injuries*	1,431	1,343	1,270
Total Vehicles Involved	29,961	32,656	32,723
Total Persons Involved	35,052	36,127	35,055
Total Pedestrians Involved	612	592	657
Pedestrian Fatalities	25	14	16
Fatalities/100 Million VMT	1.50	1.08	0.91
Injuries/100,000 Population	1120.55	1151.04	1088.79

* The definition of disabling and non-disabling injury is from Model Minimum Uniform Crash Criteria (MMUCC). Disabling Injury: Any injury, other than a fatal injury, which prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred. Non-Disabling Injury: Any injury, other than a fatal injury or an incapacitating injury, which is evident to observers at the scene of the crash in which the injury occurred.

2.2 2000~2009 DC Collisions Trend

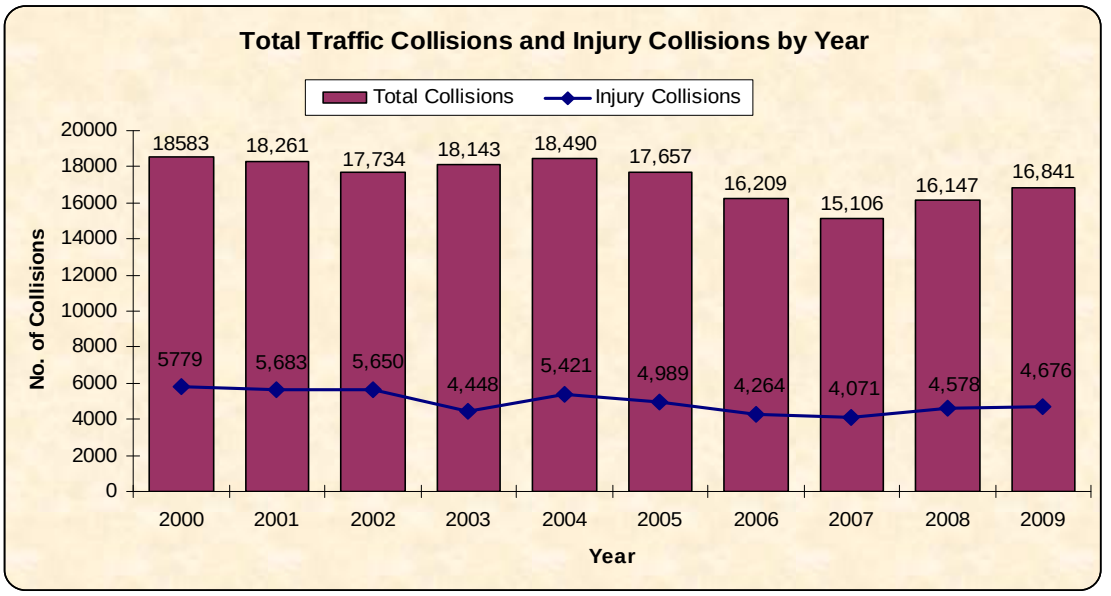

Figure 2.1 Total Collisions and Injury Collisions by Year

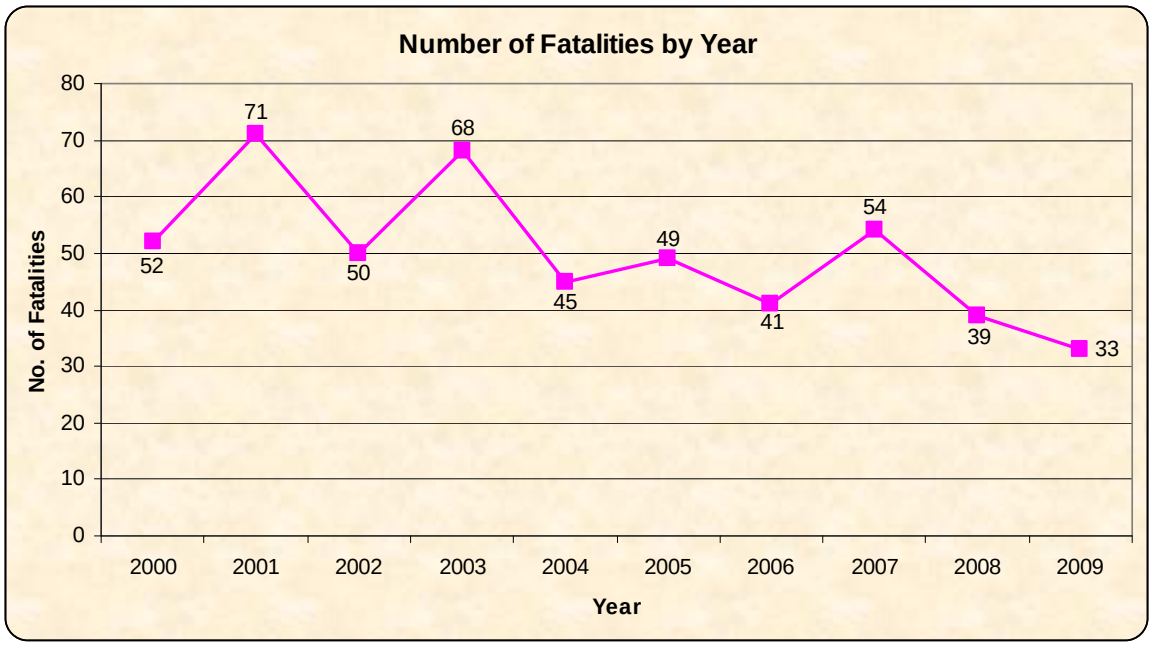

Figure 2.2 Number of Fatalities by Year

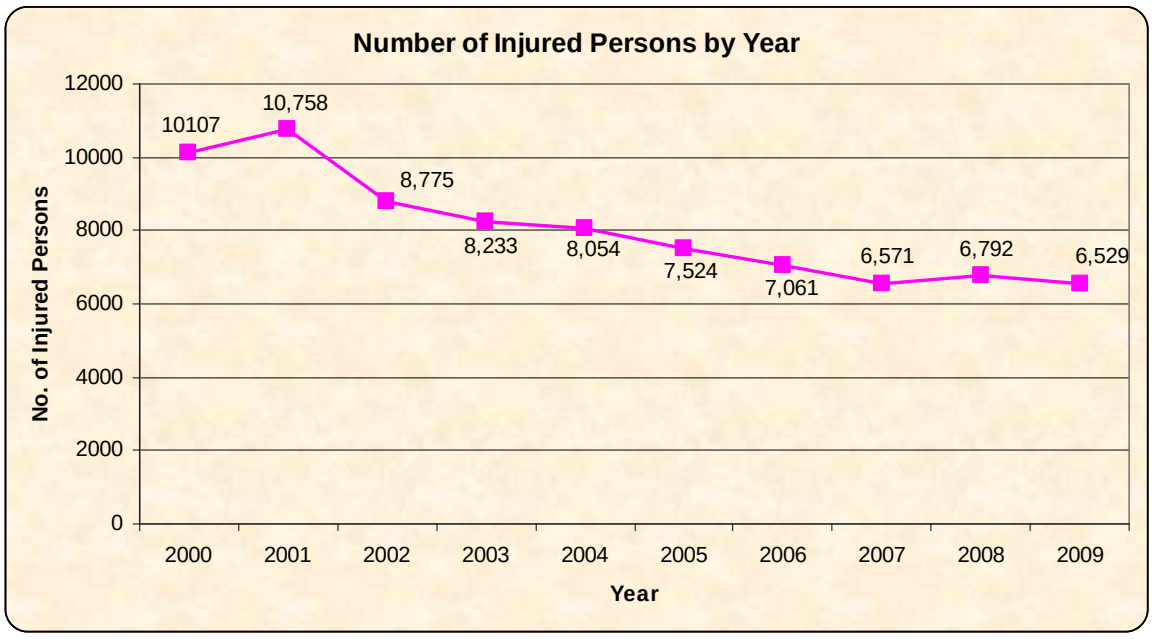

Figure 2.3 Number of Injured Persons by Year

As shown in Table 2.1 and Figure 2.1, the number of motor vehicle crashes showed a slight increase trend from 2007 to 2009. The improvement of MPD traffic crash reporting system may contribute to this increase since the chance to miss records is minimized greatly with electronic system. However, the total number of fatalities, injuries, disabling

injuries and non-disabling injuries from 2000 to 2009 show a descending trend as noted in Figure 2.2 to 2.5.

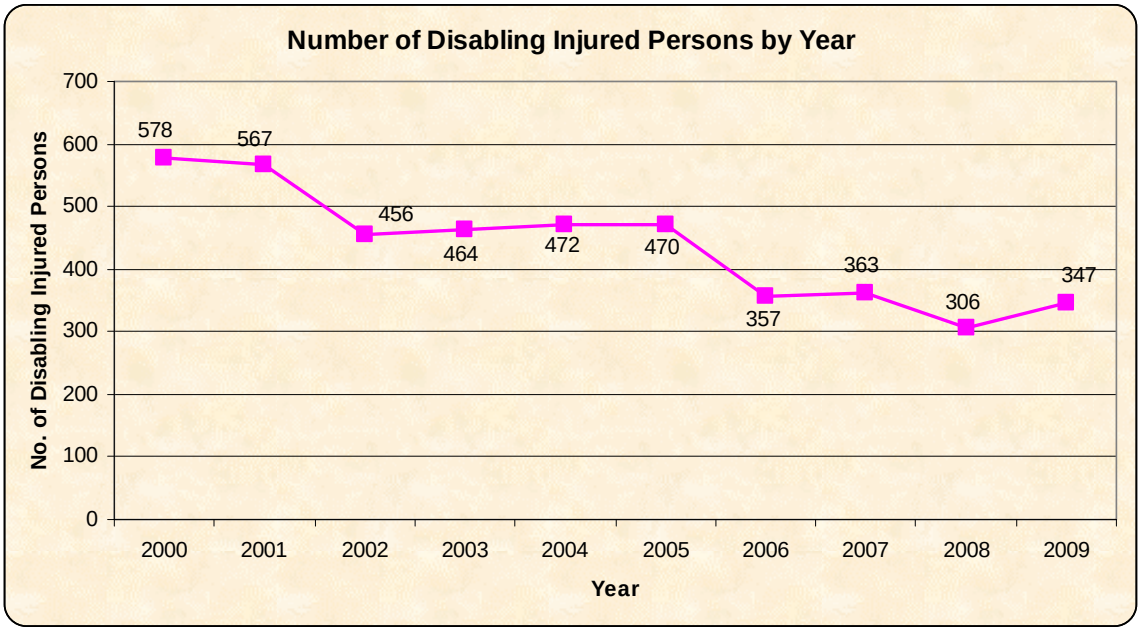

Figure 2.4 Number of Disabling Injured Persons by Year

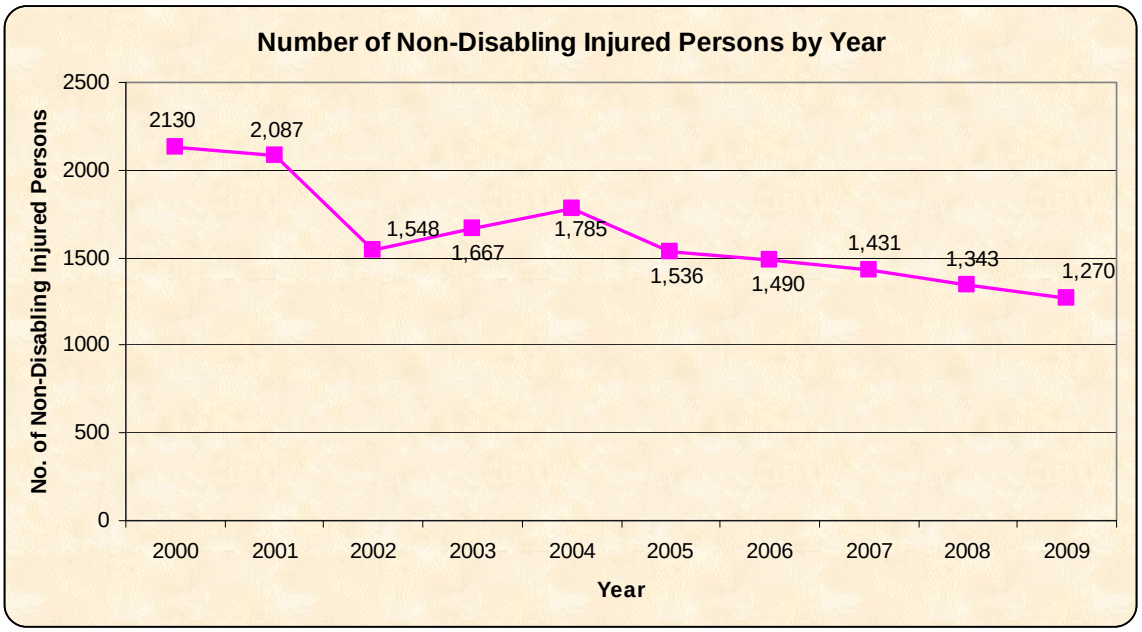

Figure 2.5 Number of Non-Disabling Injured Persons by Year

CHAPTER 3 COLLISION CHARACTERISTICS

3.1 Time

3.1.1 Traffic Collisions by Hour of the Day

Table 3.1 is the 2009 crashes listed by time of day. As shown in Table 3.1 and Figure 3.2, more motor vehicle crashes were reported between the hours of 8AM (hour 08) and 6PM (hour 18), while 4,124 of injury involved crashes occurred during this 11-hour period. Overall, the numbers of collisions, fatalities, and injuries that occurred from 12PM-11PM (hour 12-23) were relatively higher than those occurred from 00AM-11AM, as shown in Figures 3.1 through 3.3.

Table 3.1 Collisions, Fatalities, and Injuries by Hour of day in 2009

Hour	Collisions	Fatalities	Injuries
00	585	2	206
01	417	4	136
02	420	1	168
03	466	1	180
04	229	1	90
05	236	0	81
06	315	0	135
07	609	0	256
08	998	2	437
09	876	2	341
10	774	2	286
11	763	0	320
12	760	0	327
13	847	2	409
14	930	2	353
15	1,118	0	381
16	1,213	0	466
17	1,140	1	434
18	1,038	2	370
19	722	4	301
20	606	0	216
21	587	1	231
22	622	2	212
23	570	4	193
Total	16,841	33	6,529

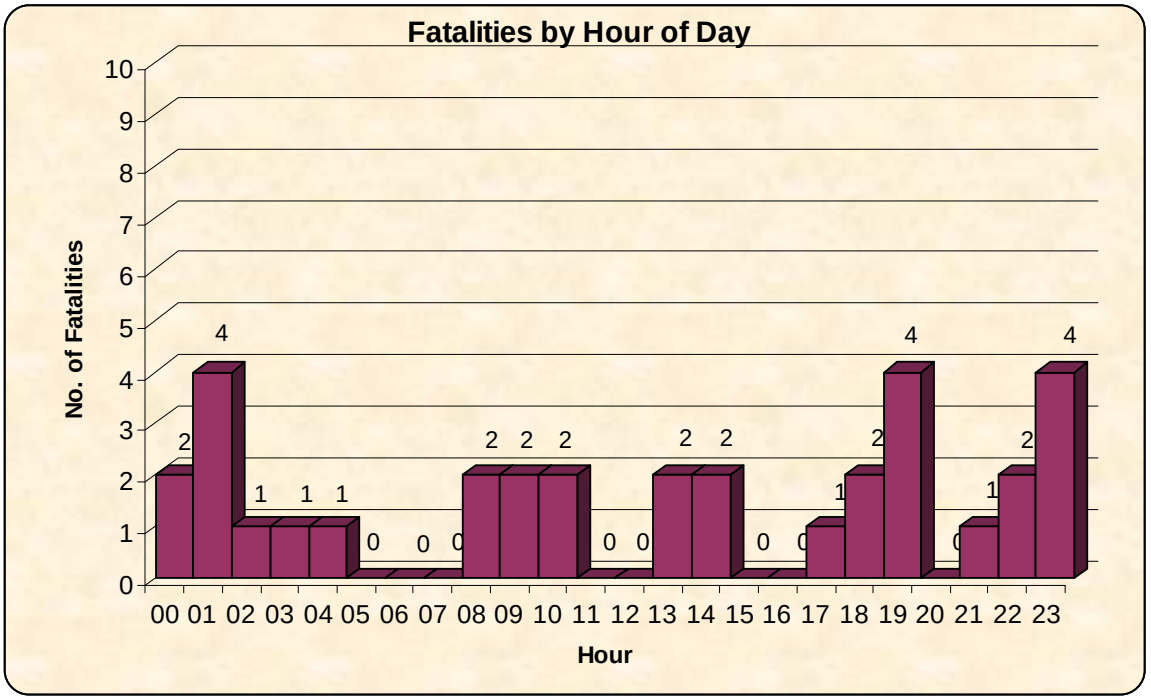

Figure 3.1 Fatalities by Hour of Day in 2009

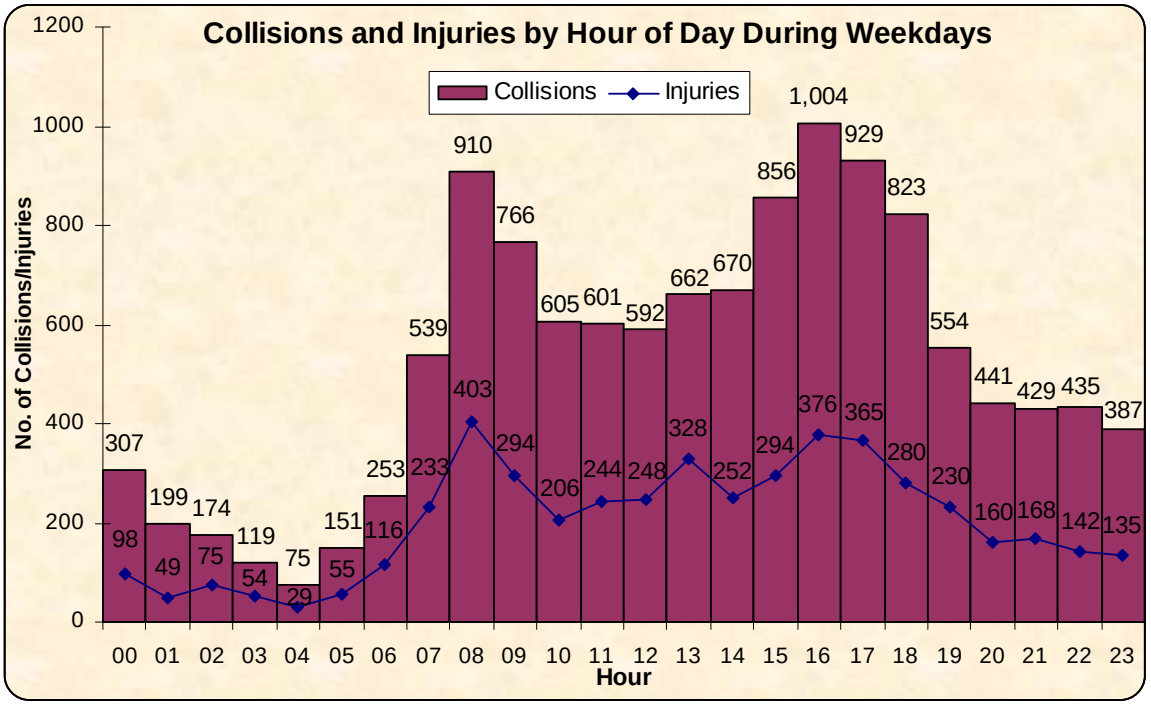

Figure 3.2 Collisions and Injuries by Hour of Day During Weekdays in 2009

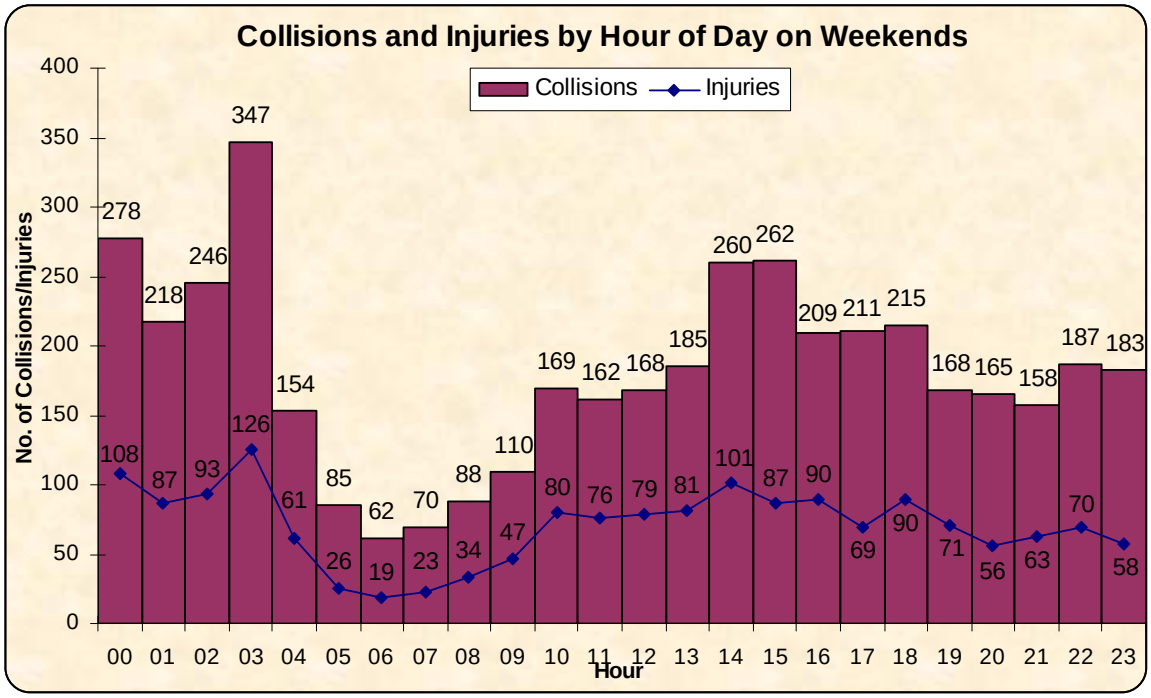

Figure 3.3 Collisions and Injuries by Hour of Day on Weekends in 2009

3.1.2 Traffic Collisions by Day of Week

As observed in Figure 3.4 and Table 3.2, the total number of collisions for weekdays was similar, with higher number of crashes occurring on Fridays. The lowest total number of crashes was recorded on Sundays.

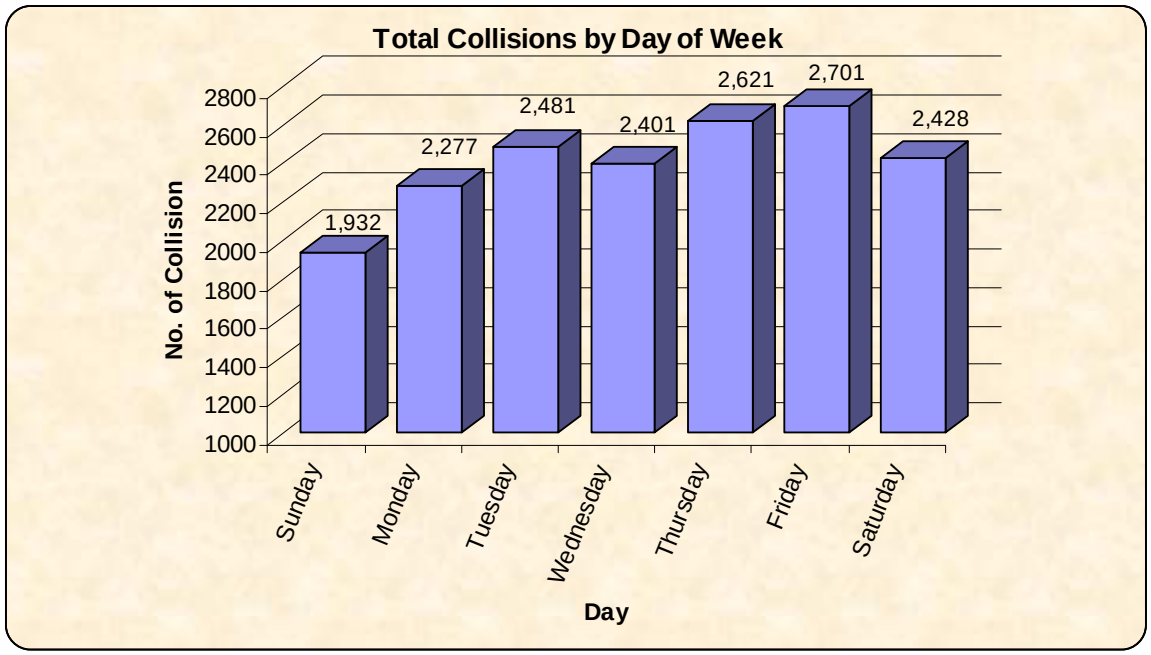

Figure 3.4 Total Collisions by Day of Week in 2009

Table 3.2 Collisions, Fatalities, and Injuries by Day of Week in 2009

Weekday	Collisions	Fatalities	Injuries
Sunday	1,932	5	749
Monday	2,277	3	901
Tuesday	2,481	6	972
Wednesday	2,401	2	952
Thursday	2,621	2	985
Friday	2,701	6	1,024
Saturday	2,428	9	946
Total	16,841	33	6,529

3.1.3 Traffic Collisions by Month

Table 3.3 and Figure 3.5 show the overall motor vehicle crashes in 2009 by month of year. As depicted in the table and illustration, the total number of collisions that occurred in the first half of the year (January through June) was similar to the second half (July through December). Overall, the total number of collisions varied from month to month, with the highest and lowest number of motor vehicle crashes being respectively 1,581 (October) and 1,184 (February).

Table 3.3 Collisions, Fatalities, and Injuries by Month in 2009

Month	Collisions	Fatalities	Injuries
1	1,489	2	575
2	1,184	1	445
3	1,458	2	557
4	1,469	2	617
5	1,488	7	602
6	1,273	3	500
7	1,345	1	585
8	1,300	3	504
9	1,376	2	558
10	1,581	3	587
11	1,461	3	581
12	1,417	4	418
Total	16,841	33	6,529

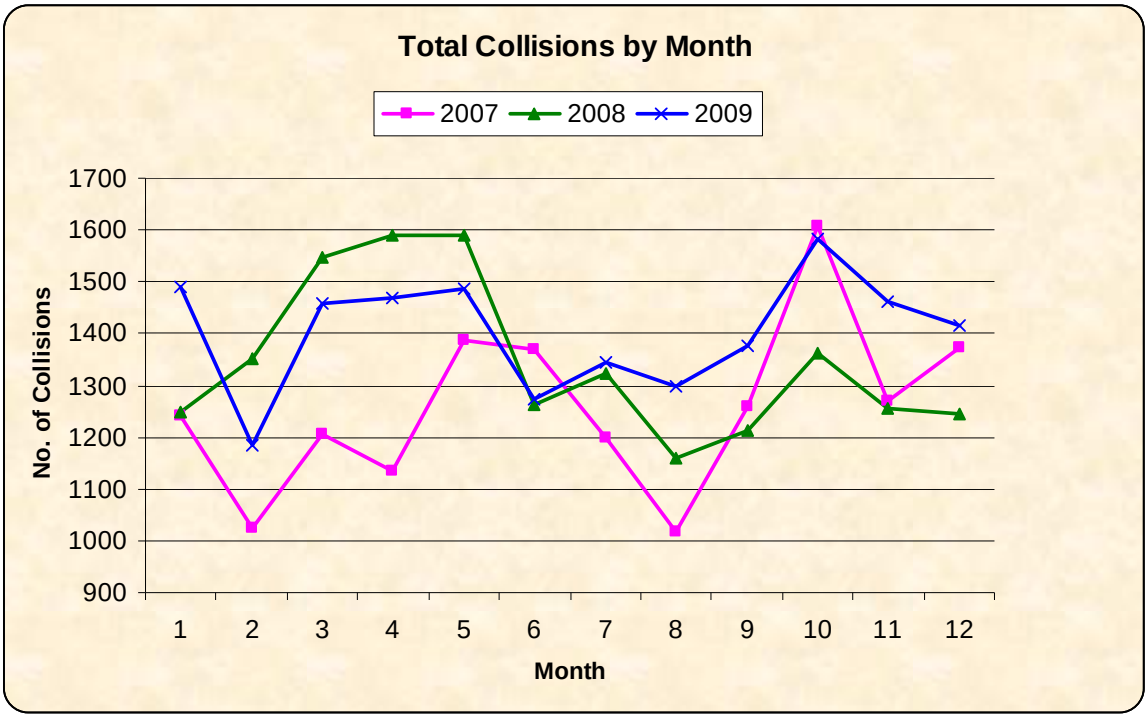

Figure 3.5 Total Collisions by Month

3.2 Location

3.2.1 Collisions by Quadrant

Based on the results in Table 3.4, it can be observed that the Northwest quadrant recorded the highest number of reported motor vehicle collisions from 2007 through 2009. This is due to the fact that the NW quadrant represents 42.65% of area of DC; also, the Central Business District is located in the NW quadrant with a considerable amount of traffic volume.

Table 3.4 Collisions, Fatalities, and Injuries by Quadrant

Quadrant	2007			2008			2009		
	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries
NW	7,221	9	2,684	7,924	14	2,852	8,168	11	2,758
NE	3,456	7	1,680	3,311	5	1,440	3,464	7	1,423
SE	2,580	5	1,205	2,597	12	1,333	2,776	5	1,157
SW	360	1	139	725	0	321	547	2	214
BN	1,489	6	834	1,518	8	827	1,751	8	929
Unknown	0	0	0	72	0	19	135	0	48
Total	15,106	54	6,571	16,147	39	6,792	16,841	33	6,529

Note: NW=Northwest, NE=Northeast, SE=Southeast, SW=Southwest, BN=Border

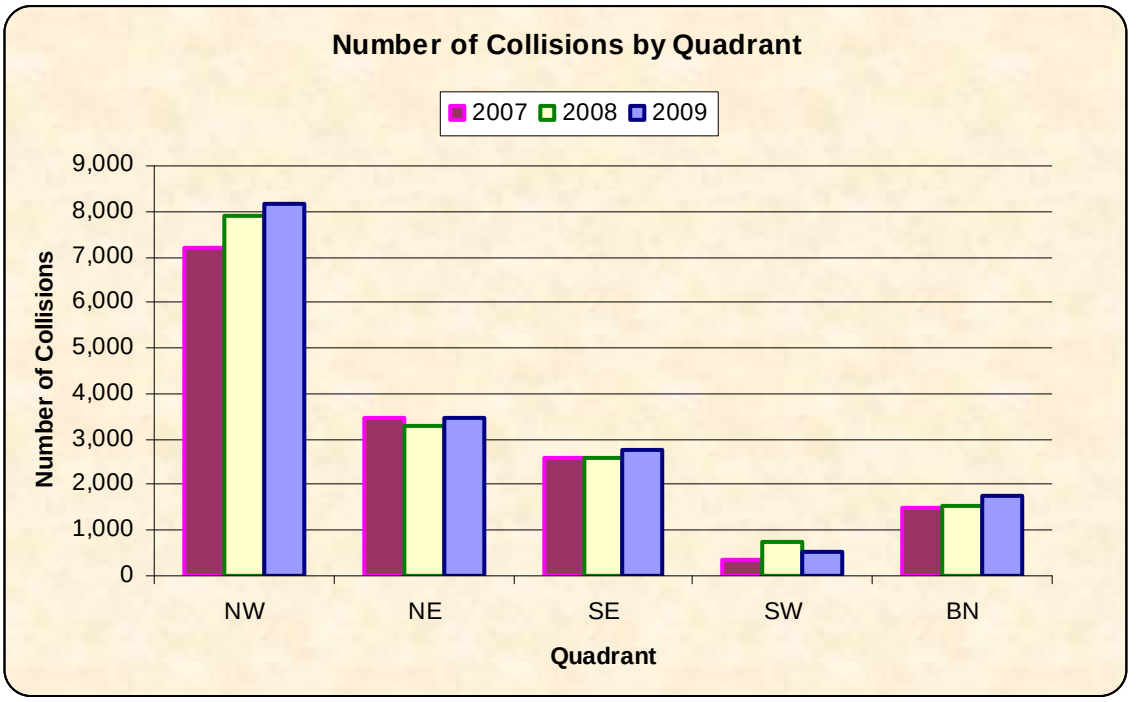

Figure 3.6 Number of Collisions by Quadrant

3.2.2 Collisions by Ward

Washington, DC is divided into eight (8) wards and each ward consists of various designated neighborhoods. The frequency of motor vehicle crashes for each ward was compiled from the crash data and presented in Table 3.5. The result of the computations shows that Ward 2, the downtown area, recorded the highest number of reported motor vehicle collisions from 2007 through 2009. Ward 1 and 3 recorded the lowest number of crashes.

Table 3.5 Collisions, Fatalities, and Injuries by Ward

Ward	2007			2008			2009		
	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries
1	1,014	6	316	1,344	1	435	1,371	2	435
2	3,059	2	988	3,364	8	1,094	3,349	3	995
3	1,107	4	412	1,018	4	377	1,100	2	387
4	1,537	3	751	1,260	3	579	1,391	4	572
5	2,038	6	1,008	1,958	4	870	2,120	6	861
6	2,127	8	952	2,149	3	889	1,959	2	743
7	1,669	14	888	1,462	9	771	1,698	7	810
8	1,465	4	720	1,541	6	903	1,328	7	567
Border	1,090	7	536	1,472	1	627	1,503	0	687
Unknown	0	0	0	579	0	247	1,022	0	472
Total	15,106	54	6,571	16,147	39	6,792	16,841	33	6,529

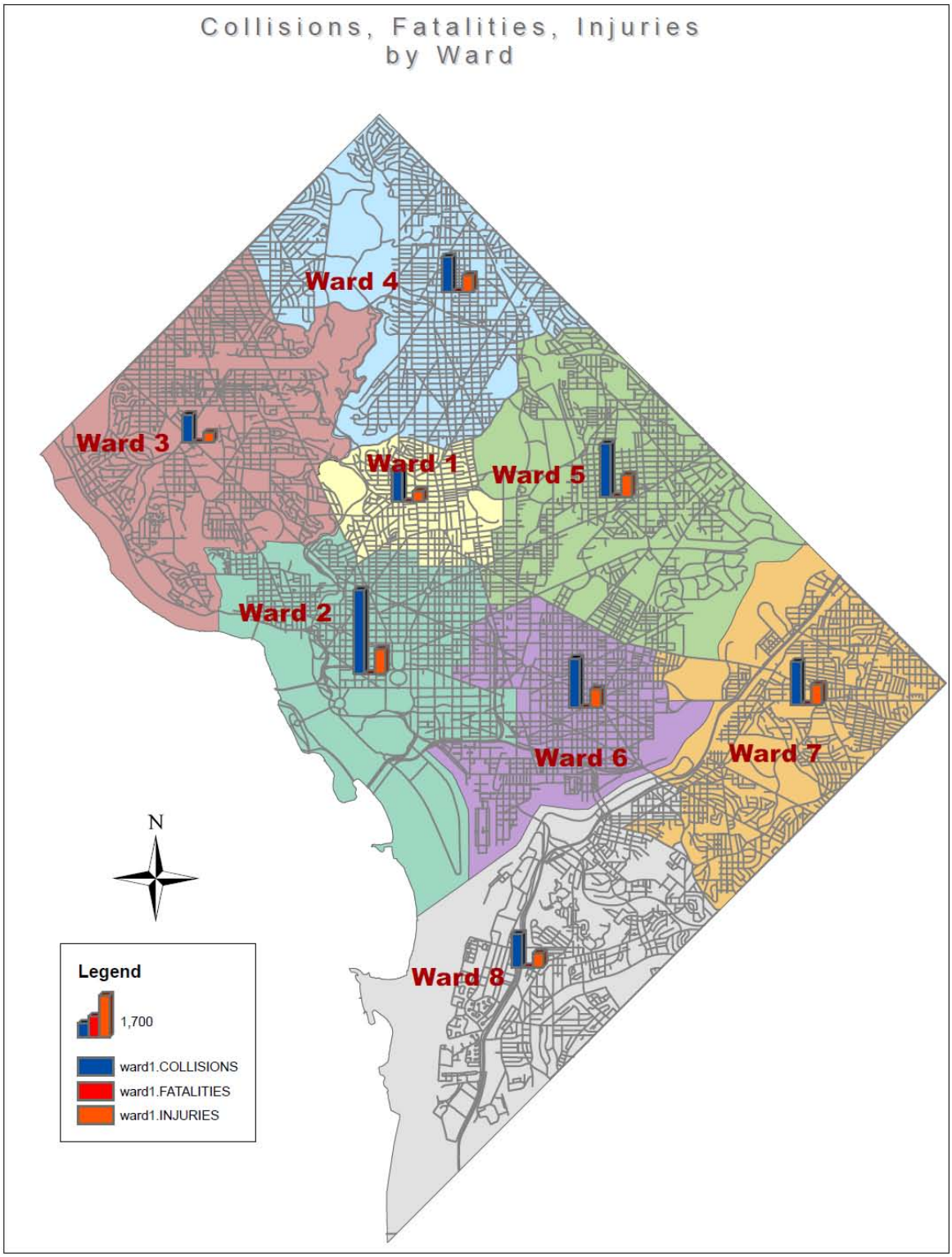

Figure 3.7 Collisions, Fatalities, and Injuries by Ward in 2009

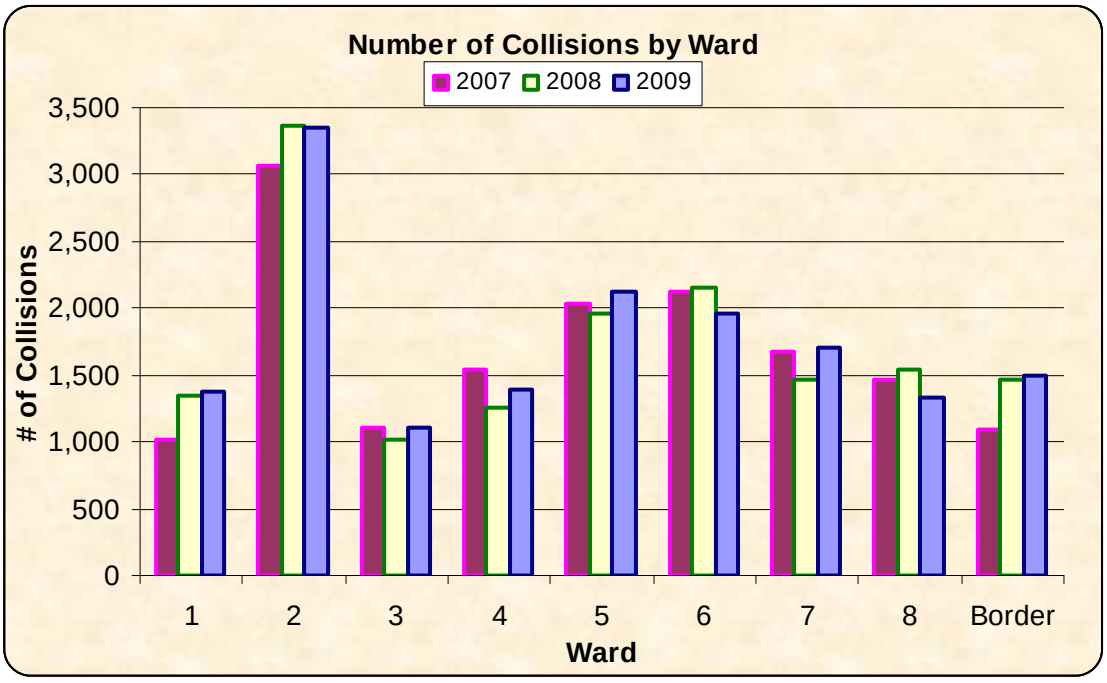

Figure 3.8 Number of Collisions by Ward

3.2.3 Collisions by Police District

As mentioned earlier, the traffic crash reports (PD-10 forms) were provided by the seven Districts of the DC Metropolitan Police Department. Each crash that occurred within the jurisdiction was managed and distributed by the designated police district. As observed from Table 3.6 and Figures 3.9 and 3.10, District 1 reported the highest number of collisions from 2007 through 2009 while District 7 recorded the least number of crashes.

Table 3.6 Collisions, Fatalities, and Injuries by Police District

Police District	2007			2008			2009		
	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries
1	3,568	8	1,531	3,996	6	1,597	3,828	5	1,455
2	2,324	2	770	2,943	9	943	3,267	3	1,009
3	1,922	1	600	2,081	1	687	2,090	2	692
4	1,832	3	918	1,556	3	701	1,744	5	750
5	2,058	1	1,035	2,178	4	1,002	2,242	5	890
6	1,917	11	983	1,735	10	918	2,126	6	1,040
7	1,341	2	676	1,553	6	902	1,514	7	675
Unknown	144	26	58	105	0	42	30	0	18
Total	15,106	54	6,571	16,147	39	6,792	16,841	33	6,529

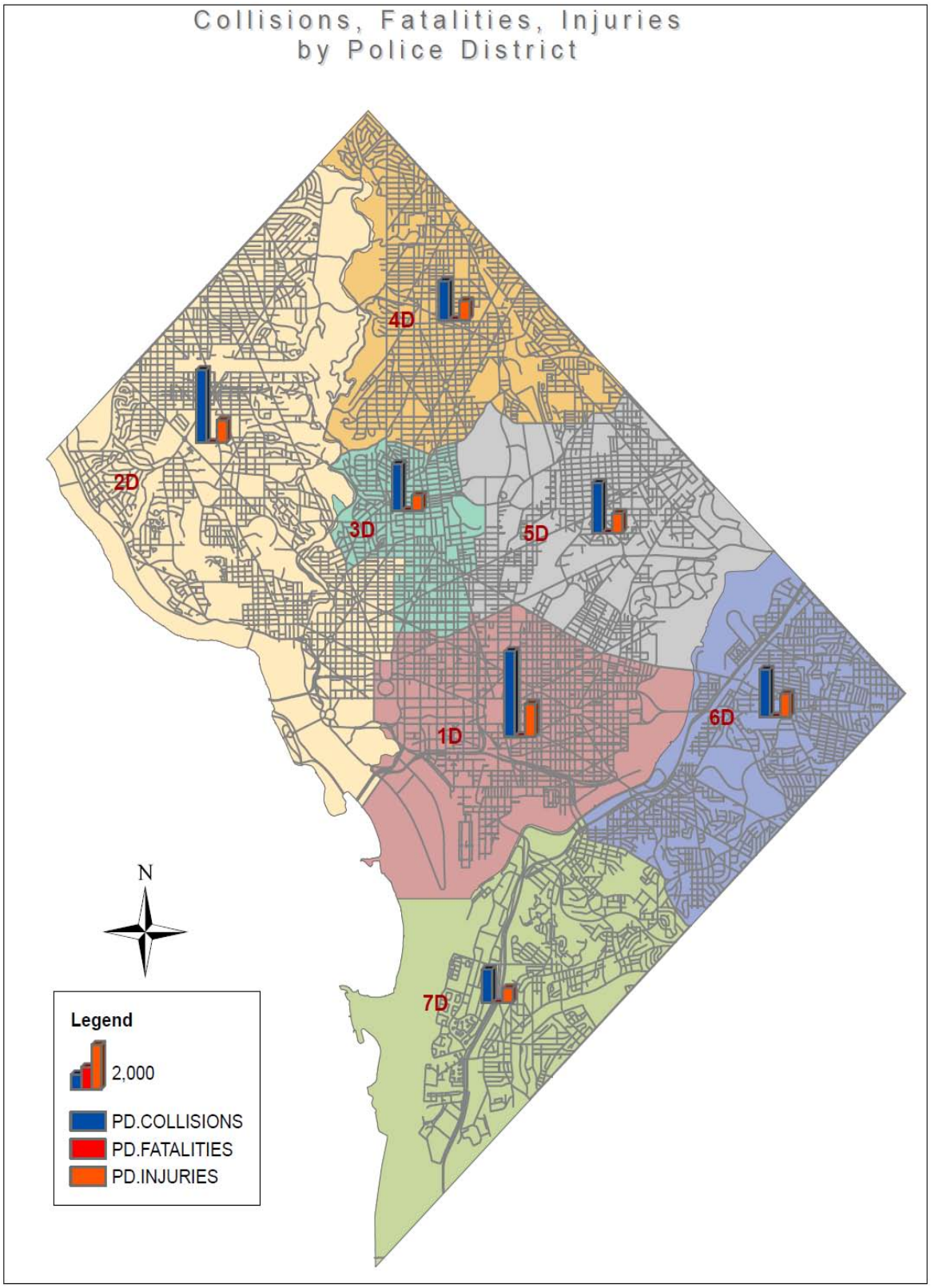

Figure 3.9 Collisions, Fatalities, and Injuries by Police District in 2009

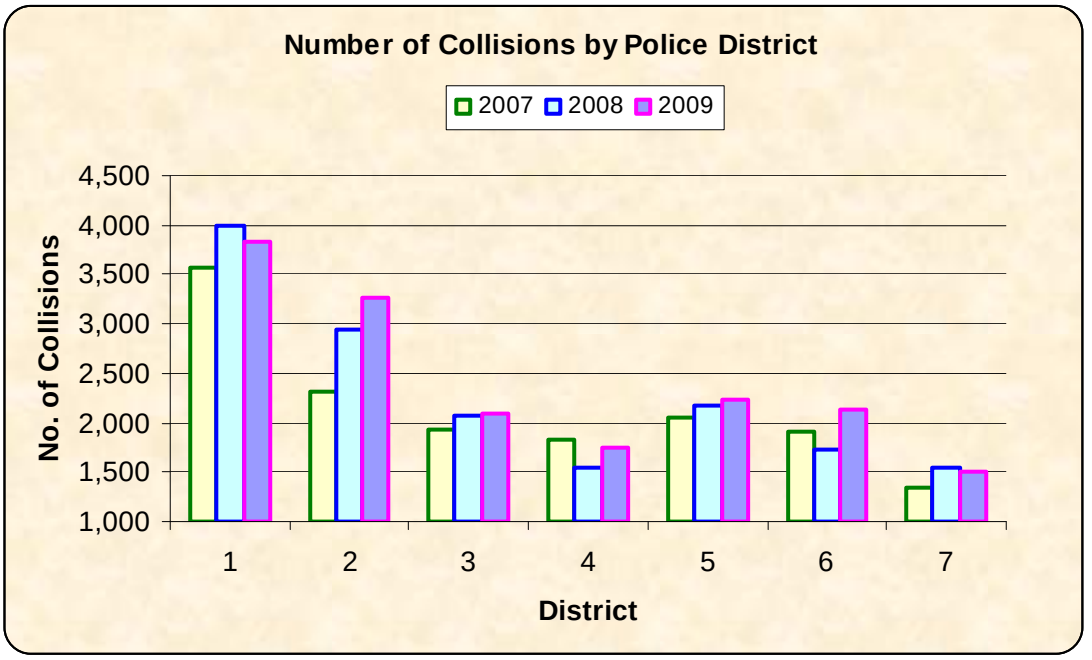

Figure 3.10 Number of Collisions by Police District

3.2.4 Collisions by Advisory Neighborhood Commissions

Washington, DC comprises of 37 Advisory Neighborhood Commissions (ANCs). From the analysis of the results presented in Table 3.7 and Figure 3.11, ANC Borders, ANC 5B (Arboretum, Brentwood, Brookland, Carver, Langdon, Langston, Ivy City, Trinidad) and ANC 6C (Near Northeast, Penn Quarter, Union Station) were the top three ANC locations that most frequently reported motor vehicle crashes in 2009.

Table 3.7 Collisions, Fatalities, and Injuries by ANC in 2009

ANC	Description	Total Collision	Fatality	Injury
Unk.	Unknown	910	0	402
1A	Columbia Heights, Pleasant Plains	393	0	137
1B	Cardozo, Howard University, LeDroit Park, Shaw	583	1	190
1C	Adams Morgan, Kalorama Heights, Lanier Heights, Western U Street	197	0	34
1D	Mount Pleasant	43	0	10
2A	Foggy Bottom, West End	495	0	139
2B	Dupont Circle	677	1	193
2C	Blagden Alley, Chinatown, Logan Circle, Mount Vernon Square, Shaw	388	1	150
2D	Kalorama, Sheridan	49	0	13
2E	Burleith, Georgetown, Hilandale	493	0	122

2F	Logan Circle	637	1	177
3B	Cathedral Heights, Glover Park	57	0	8
3C	Cathedral Heights, Cleveland Park, Massachusetts Heights, McLean Gardens, Woodley Park	295	1	100
3D	American University, Foxhall, Kent, The Palisades, Spring Valley, Wesley Heights	192	0	55
3E	American University Park, Friendship Heights, Tenleytown	149	1	67
3F	Forest Hills, North Cleveland Park, Tenleytown	180	0	77
3G	Chevy Chase	127	0	37
4A	Brightwood, Colonial Village, Crestwood, Shepherd Park, Sixteenth Street Heights	179	0	72
4B	Brightwood, Lamond-Riggs, Manor Park, Riggs Park, South Manor Park, Takoma	350	1	137
4C	Columbia Heights, Crestwood, Petworth, Sixteenth Street Heights	356	2	142
4D	Petworth	122	1	40
5A	Brookland, Fort Lincoln, Michigan Park, North Michigan Park, University Heights, Woodridge	490	1	246
5B	Arboretum, Brentwood, Brookland, Carver, Langdon, Langston, Ivy City, Trinidad	927	5	346
5C	Bloomingdale, Eckington, Edgewood	564	0	212
6A	North Lincoln Park, Rosedale, Stanton Park	288	0	111
6B	Barney Circle, Capitol Hill, Eastern Market	505	0	147
6C	Near Northeast, Penn Quarter, Union Station	750	1	292
6D	Carrollsburg, Fort McNair, Navy Yard, Near Southwest/Southeast, Waterfront	444	1	184
7A	Fort Dupont, Greenway, River Terrace	300	1	166
7B	Fairfax Village, Hillcrest, Penn Branch, Randle Highlands	254	2	102
7C	Burrville, Deanwood, Grant Park, Lincoln Heights	261	0	124
7D	Eastland Gardens, Kenilworth, Kingman Park, Mayfair	400	3	197
7E	Benning Heights, Capitol View, Fort Davis, Marshall Heights	239	1	141
8A	Anacostia, Fairlawn, Fort Stanton, Hillsdale	262	0	75
8B	Garfield Heights, Knox Hill, Shipley Terrace	244	0	114
8C	Barry Farms, Bolling Air Force Base, Congress Heights, St. Elizabeths Hospital	321	2	162
8D	Bellevue, Far Southwest	205	1	83
8E	Congress Heights, Valley Green, Washington Highlands	192	0	99
Brd.	Border Between ANCs	3323	5	1426
Total		16,841	33	6,529

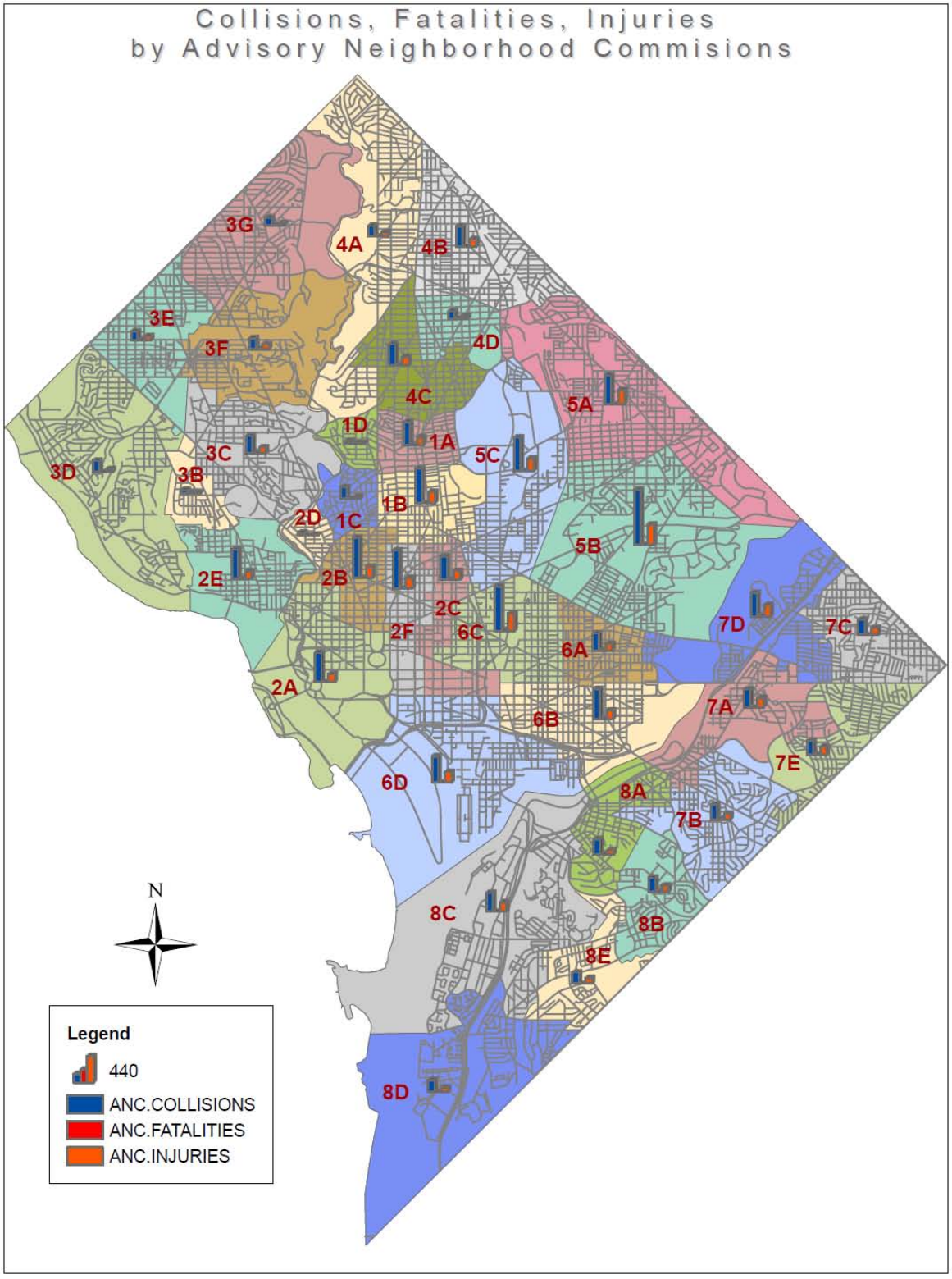

Figure 3.11 Collisions, Fatalities, and Injuries by ANC in 2009

3.2.5 Collisions by On-Street Location

In order to mitigate the severity of a crash, it is crucial to identify and compare the intersection and non-intersection crashes. Based on the results presented in Table 3.8, most of the vehicular crashes in 2009 typically occurred within 100 feet of intersections as compared to other on-street locations. These collisions comprise of 38% (6,446) of the total motor vehicle crashes observed in 2009, followed by 32% (5,447) of crashes at intersections. The results are also presented in Figure 3.12.

Table 3.8 Collisions, Fatalities, and Injuries on Freeway and Bridge in 2009

On-Street Location	Total Collisions	Fatal Collisions	Injury Collisions	PDO Collisions	Fatalities	Injuries
At Intersection	5,447	11	2,014	3,422	12	2,889
Within 100' of Intersection	6,446	3	1,465	4,978	3	1,940
Not at Intersection	3,906	13	965	2,928	13	1,392
Private Property	234	1	44	189	1	50
Other	218	1	44	173	1	61
Unknown or N/A	590	3	144	443	3	197
Total	16,841	32	4,676	12,133	33	6,529

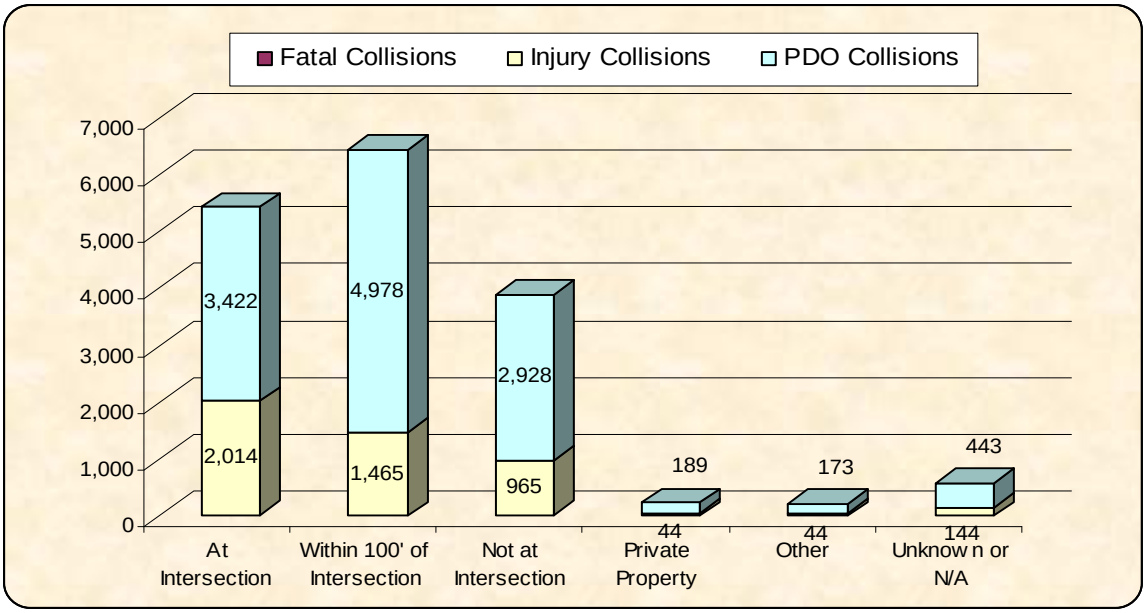

Figure 3.12 Fatal, Injury, and PDO Collisions by On-Street Location in 2009

3.2.6 Collisions by Construction Zone

Work zone safety continues to be a high-priority issue for traffic engineering professionals and highway agencies. Thus, there is a need to assess crashes in such areas in order to identify mitigation strategies to reduce crashes. As observed in table 3.9, the number of

collisions in construction zones was substantially increased from 2007 through 2009. This trend was caused by not only the increasing construction in DC, but also by the improvement of the traffic crash reporting system. Table 3.10 shows the summary of crashes recorded in construction and non-construction zones. These crashes were compiled in order to compare the crash experience in DC.

Table 3.9 Number of Collisions in Construction Zone by Year

Year	2007	2008	2009
Number of Collisions in Construction Zone	185	391	702
Percentage of Collisions in Construction Zone	1.22%	2.42%	4.17%

Table 3.10 Summary of Collisions by Construction Zone in 2009

Construction Zone	Total Collisions	Fatal Collisions	Injury Collisions	PDO Collisions	Fatalities	Injuries
Construction Zone	702	0	203	499	0	298
Not In Construction Zone	16,139	32	4,473	11,634	33	6,231
Total	16,841	32	4,676	12,133	33	6,529

3.3 Collision Classification

3.3.1 Collision Severity Type

Crash classification continues to be an important severity indicator for government agencies and local authorities examining the traffic safety issues at particular intersections or corridors. On the basis of the results presented in Figure 3.13, fatal, injury and PDO collisions respectively represented approximately 0.2%, 27.8% and 72.0% of the total crashes recorded in 2009.

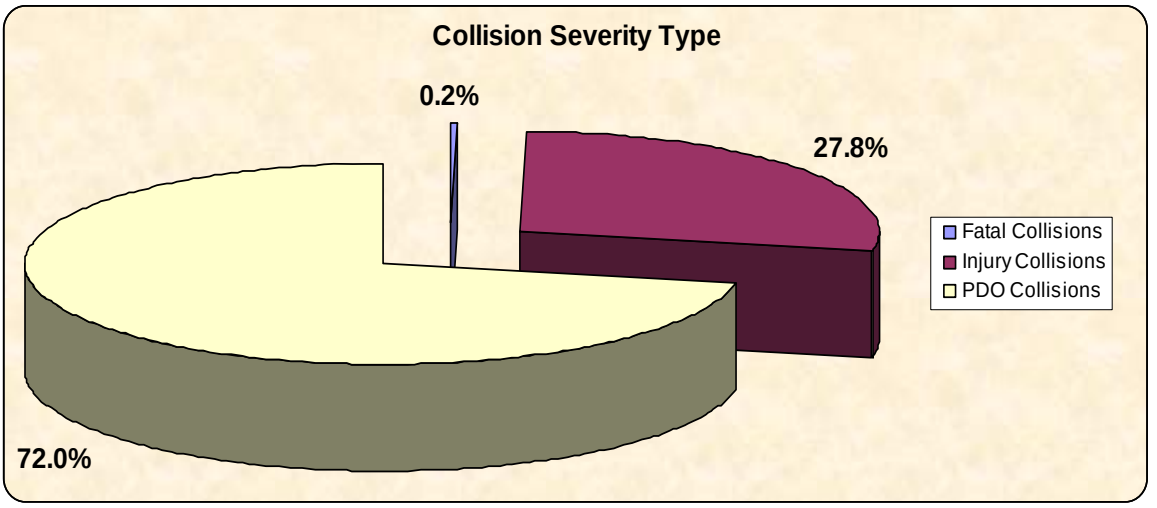

Figure 3.13 Collision Severity Type in 2009

3.3.2 Collision Type

As shown in Table 3.11 and Figure 3.14, side swiped (3,893), rear end (3,667) and right angle collisions (1,717) were the three most frequently reported collision types in 2009. From Figure 3.14, it can be observed that the total number of parked vehicle collisions in 2008 was significantly higher as compared to those reported in 2007 and 2009.

Table 3.11 Summary of Collision by Collision Type in 2009

Type of Collision	Total Collisions	Fatal Collisions	Injury Collisions	PDO Collisions	Fatalities	Injuries
Side Swiped	3,893	1	417	3,475	1	573
Rear End	3,667	0	1,317	2,350	0	1,951
Right Angle	1,717	4	687	1,026	5	1,068
Left Turn Hit Vehicle	1,294	0	423	871	0	623
Parked Vehicle	1,292	2	106	1,184	2	128
Other	812	1	281	530	1	366
Fixed Object	809	6	224	579	6	297
Right Turn Hit Vehicle	620	0	104	516	0	139
Backing Hit Parked Vehicle	464	0	23	441	0	27
Head On	443	4	196	243	4	324
Unknown	419	0	96	323	0	145
Straight Hit Pedestrian	408	9	339	60	9	362
Backing Hit Moving Vehicle	283	0	20	263	0	26
Ran Off Roadway	256	1	92	163	1	127
Left Turn hit Pedestrian	234	1	196	37	1	206
Right Turn Hit Pedestrian	93	3	70	20	3	75
Backing Hit Pedestrian	62	0	52	10	0	55
Non-Collision Accident	58	0	28	30	0	31
Override	15	0	5	10	0	6
Underride	2	0	0	2	0	0
Total	16,841	32	4,676	12,133	33	6,529

3.3.3 Hit and Run Collisions

As shown in Figure 3.15, the number and percentage of hit and run collisions from 2007 to 2009 showed a descending trend, even the total number of reported crashes has increased.

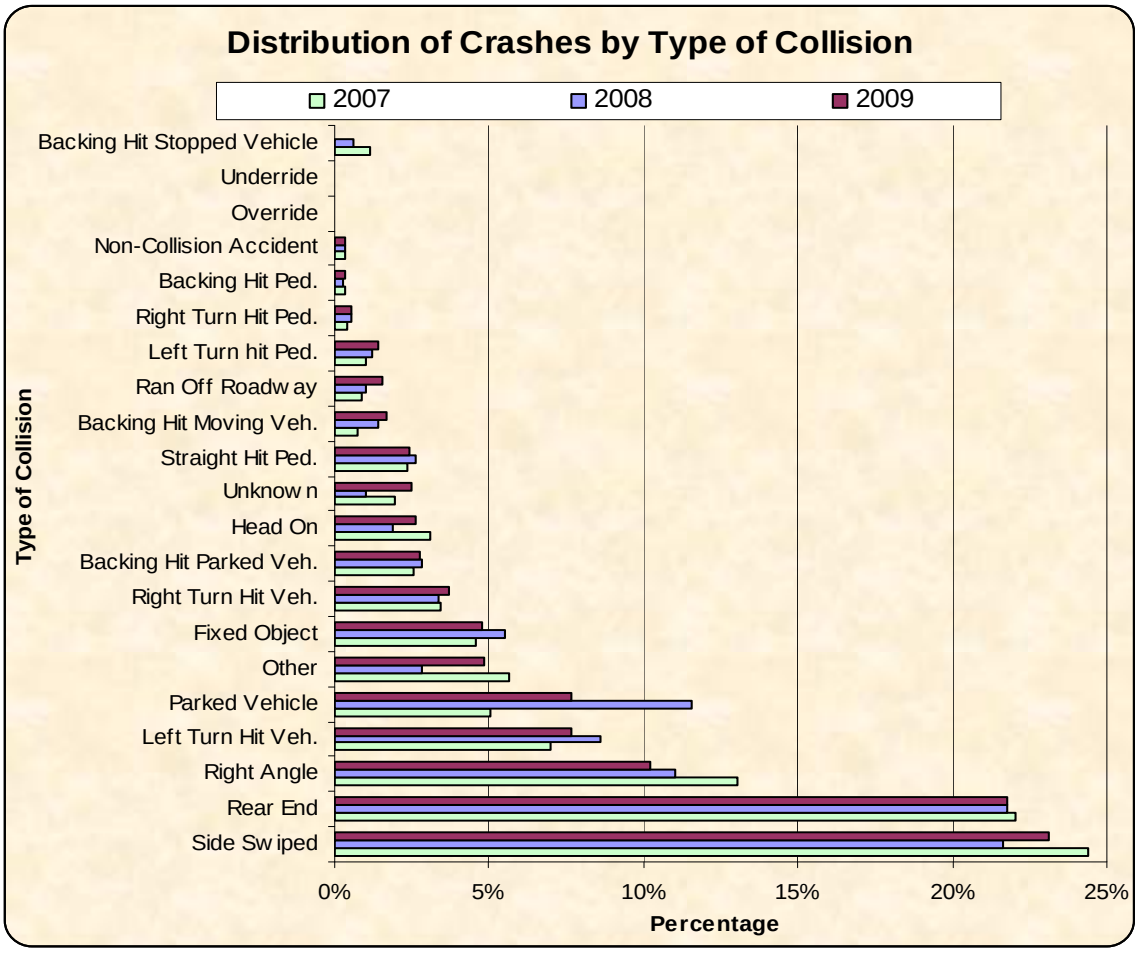

Figure 3.14 Distribution of Crashes by Type of Collision

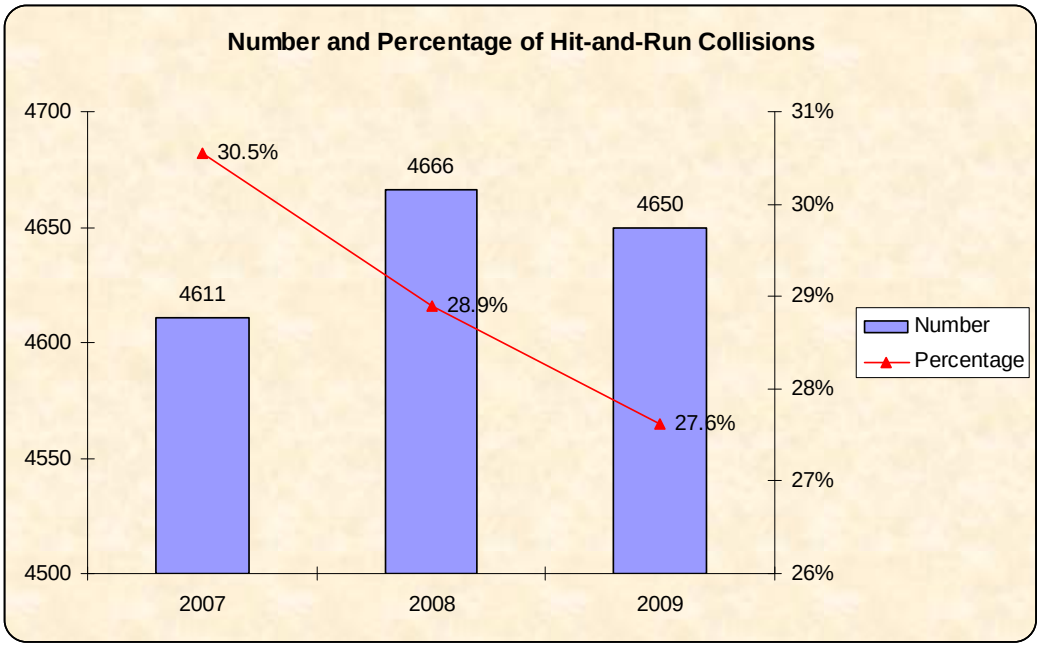

Figure 3.15 Number and Percentage of Hit and Run Collisions

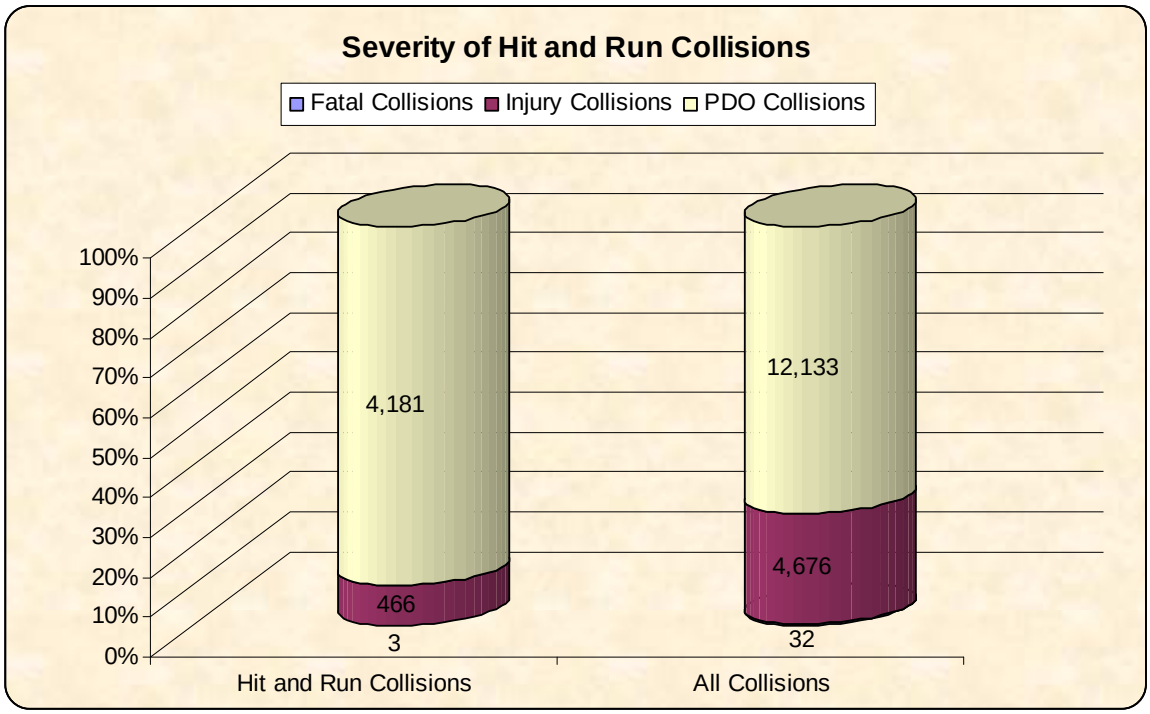

Figure 3.16 Severity of Hit and Run Collisions in 2009

3.3.4 DC Property Collisions

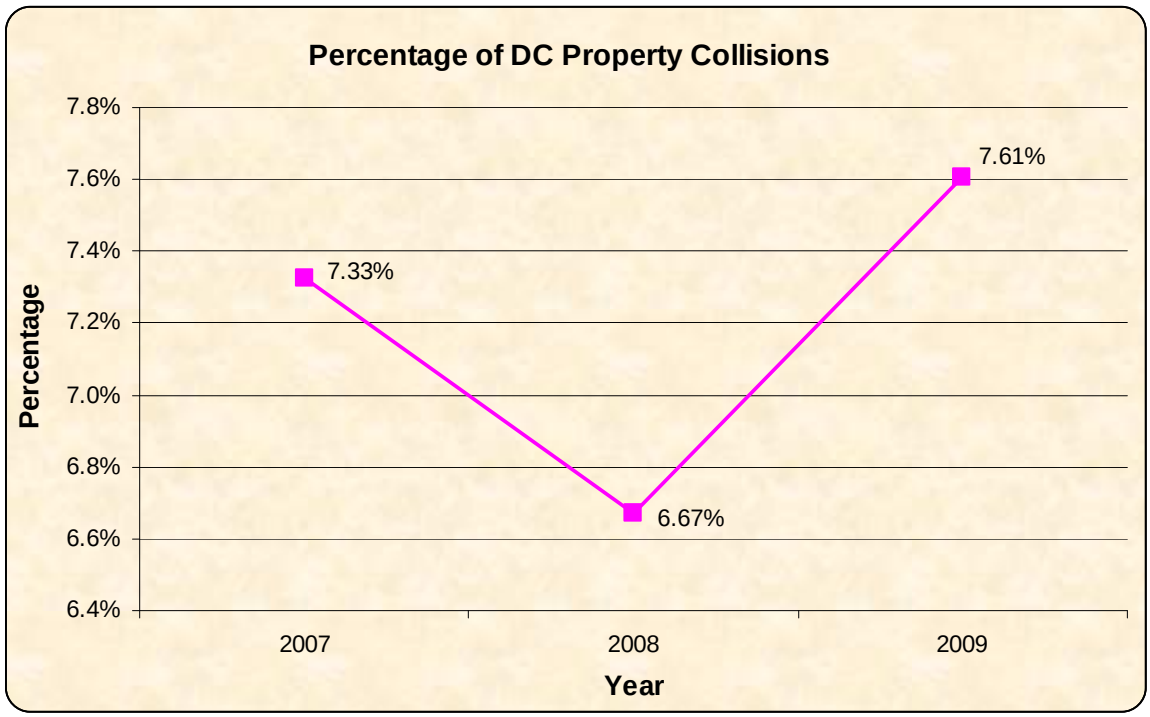

Figure 3.17 Percentage of DC Property Collisions

3.3.5 Crash by Vehicle Classification

Table 3.12 and Figure 3.18 show the summary of vehicles involved by vehicle type. From the results, it can be observed that passenger cars recorded the highest number of vehicle type involved in crashes, with a total of 14,664 reported in 2009. This is followed by trucks or trailers with a total of 2,142 vehicles involved in crashes. For display purposes, the summary of passenger cars from 2007 through 2009 was not included in Figures 3.18 through 3.20.

Table 3.12 Summary of Vehicles Involved by Vehicle Type in 2009

Vehicle Type	Vehicles Involved	Fatalities	Injuries
Passenger Auto	14,664	24	5,797
Bus	1,418	1	400
Taxi Cab	1,624	0	394
Motorcycle	202	3	139
Bicycle	353	0	264
Truck/Trailer	2,142	2	613

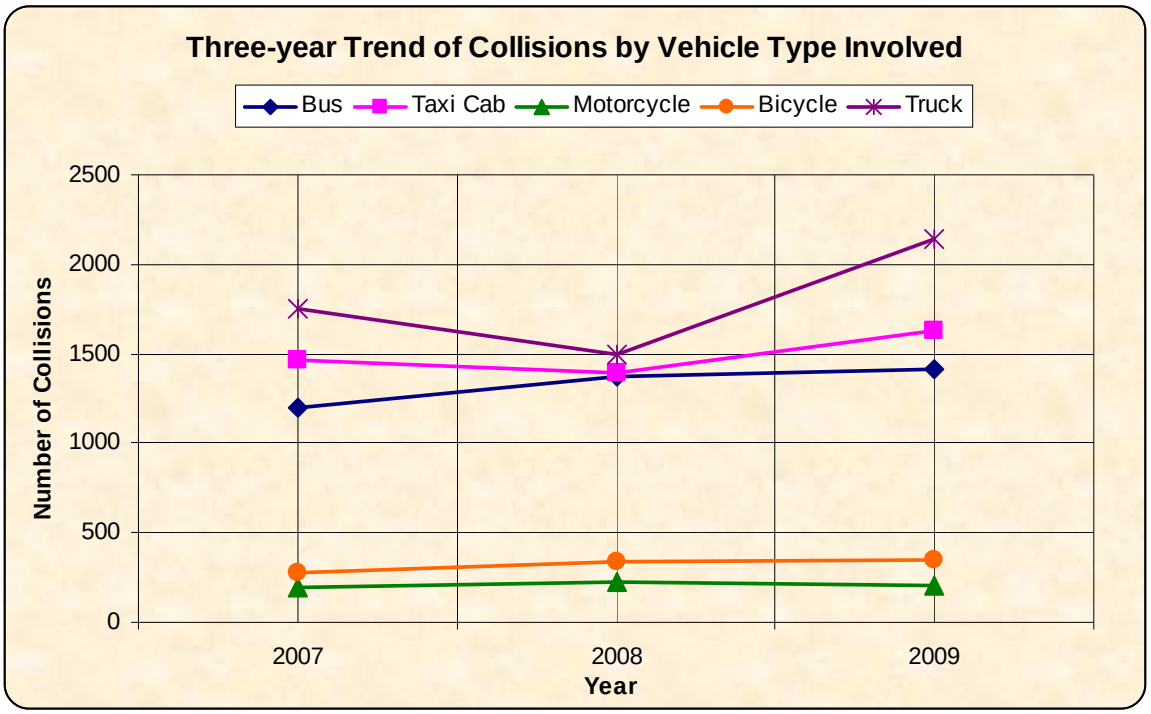

Figure 3.18 Three-year Trend of Collisions by Vehicle Type Involved

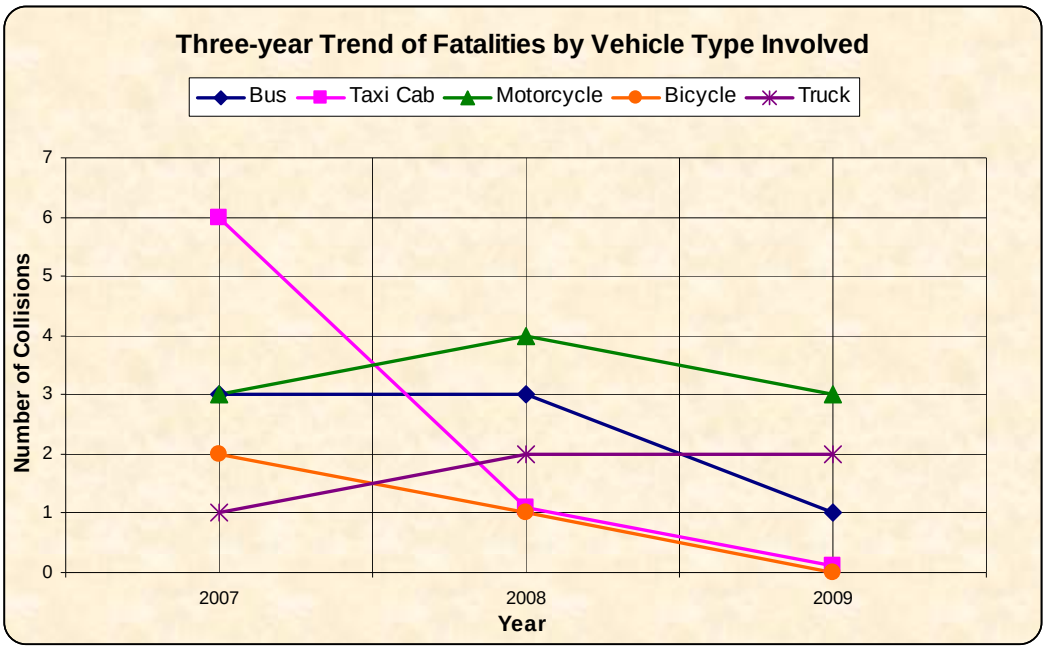

Figure 3.19 Three-year Trend of Fatalities by Vehicle Type Involved

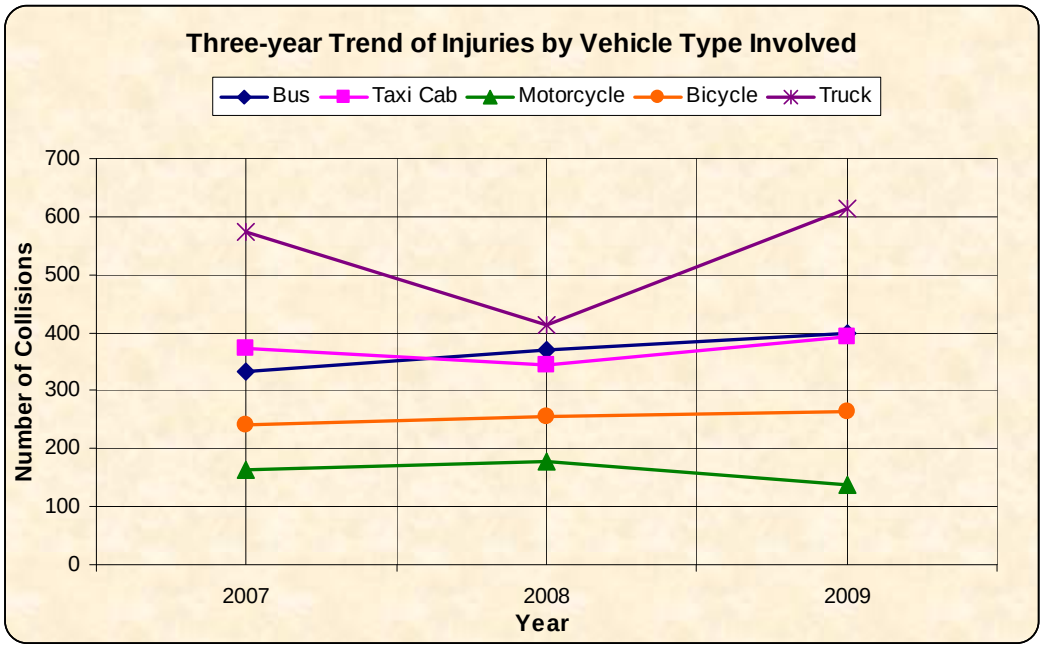

Figure 3.20 Three-year Trend of Injuries by Vehicle Type Involved

3.3.6 Pedestrian Involved Collisions

In a pedestrian friendly metropolitan area such as the District, walking is an important modal of choice. With over 50% of the workers in the District either commuting by public transportation or walking to work (*2006 American Community Survey*), it is crucial to understand the causes and severity of crashes involving pedestrians in DC. Based on the

results of the analysis presented in Figure 3.21, a general downward trend was observed with the total number of crashes involving pedestrians in 2008 being the lowest as compared to years 2007 and 2009.

From Figure 3.22 and Table 3.13, it can be determined that the age group of 21-30 had the highest number of pedestrian-involved crashes from 2007 through 2009, with the total number in 2008 observed being the highest. Furthermore, the results in Figure 3.23 show that crashes involving pedestrians by gender for all three years showed an increasing and decreasing trend for both female and male pedestrians, respectively.

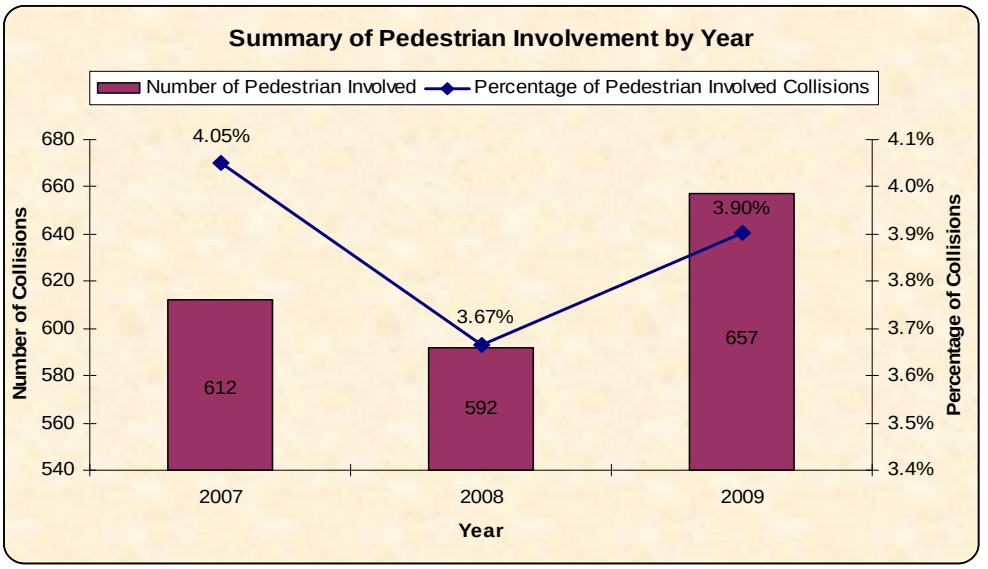

Figure 3.21 Summary of Pedestrian Involvement by Year

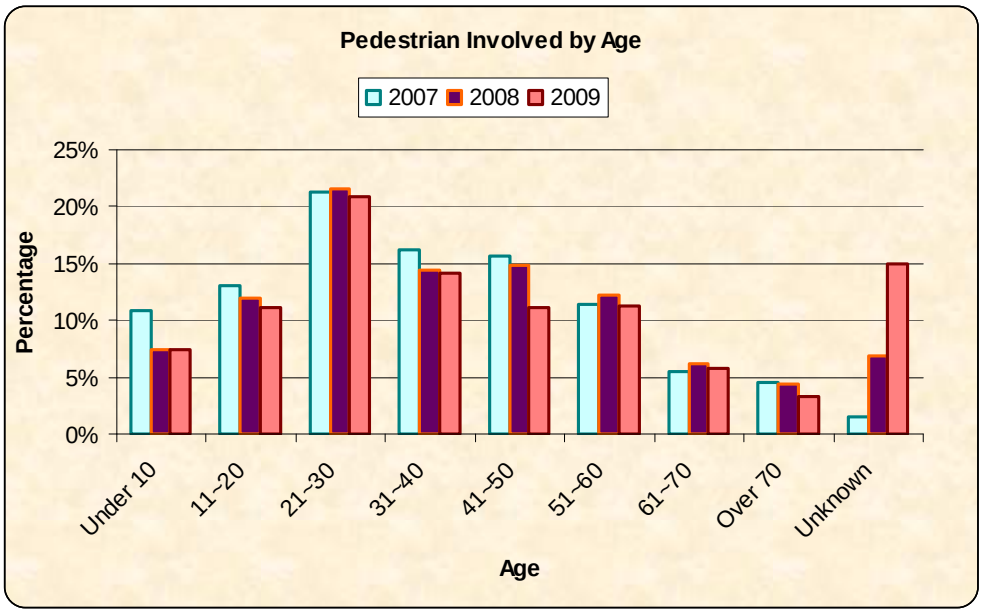

Figure 3.22 Pedestrian Involved by Age

Table 3.13 Pedestrian Involved by Age and Year

Age Group	No. of Pedestrian Involved			Percentage		
	2007	2008	2009	2007	2008	2009
Under 10	66	44	49	10.8%	7.4%	7.5%
11-20	80	71	73	13.1%	12.0%	11.1%
21-30	130	128	137	21.2%	21.6%	20.9%
31-40	99	85	93	16.2%	14.4%	14.2%
41-50	96	88	73	15.7%	14.9%	11.1%
51-60	70	72	74	11.4%	12.2%	11.3%
61-70	34	37	38	5.6%	6.3%	5.8%
Over 70	28	26	22	4.6%	4.4%	3.3%
Unknown	9	41	98	1.5%	6.9%	14.9%
Total	612	592	657	100.0%	100.0%	100.0%

Table 3.14 Pedestrian Involved Collisions by Pedestrian Action and Injury in 2009

Pedestrian Action	Fatality	Disabling	Non-Disabling	Complaint but not visible	None	Unknown	Total
With Signal in Crosswalk	2	19	59	70	0	27	177
Not in Crosswalk	3	24	41	42	0	25	135
In Crosswalk - No Signal	0	7	21	36	0	10	74
Against Signal in Crosswalk	2	8	10	9	0	9	38
From Between Parked Cars	0	7	8	19	0	14	48
In Unmarked Crosswalk	1	0	2	4	0	3	10
Other	7	10	18	53	0	19	107
Unknown	1	3	5	25	0	34	68
Total	16	78	164	258	0	141	657

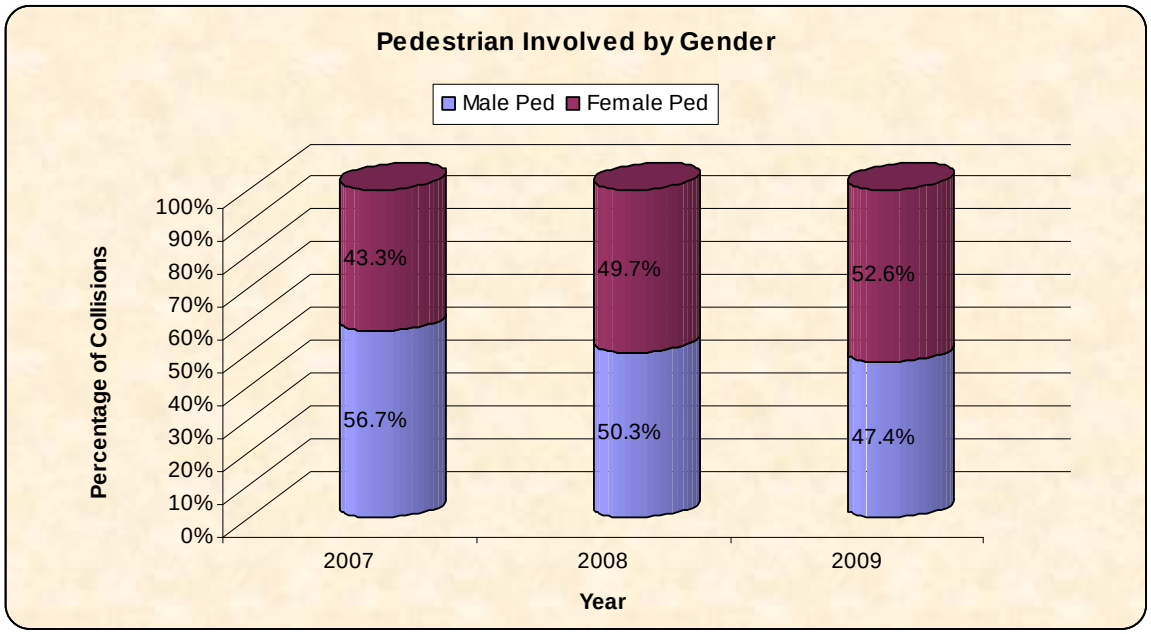

Figure 3.23 Pedestrian Involved by Gender

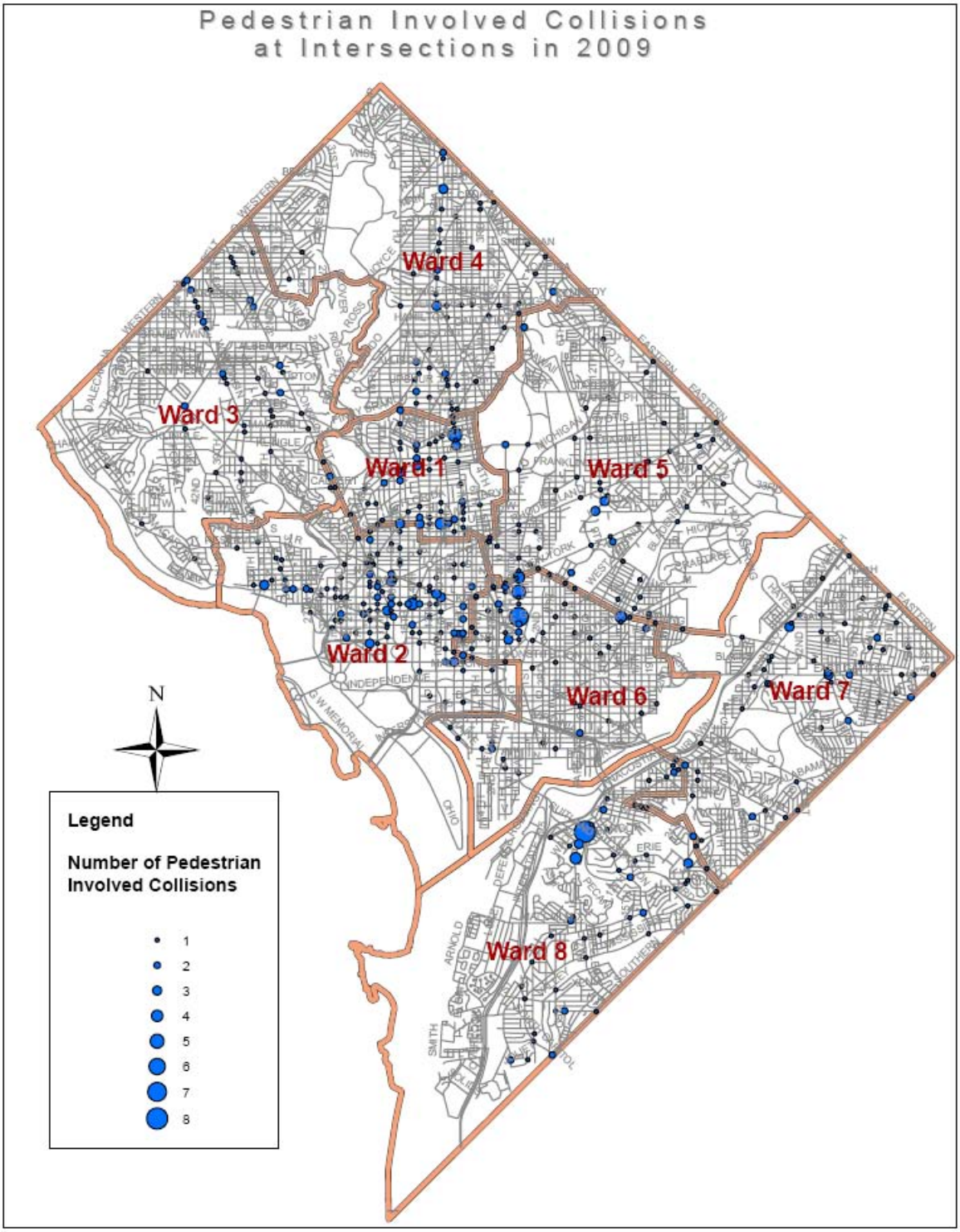

Figure 3.24 Pedestrian Involved Collisions at Intersections in 2009

3.3.7 Bicyclist Involved Collisions

With approximately 2.0% of workers in the District biking to work (*2006 American Community Survey*), it is pertinent to determine the crashes involving bicyclists on the basis of age groups and gender. Based on the results presented in Figure 3.25, crashes involving bicyclists ranged between 230 and 312 for the three–year duration. There was an increase in crashes involving bicycles from 2007 to 2009.

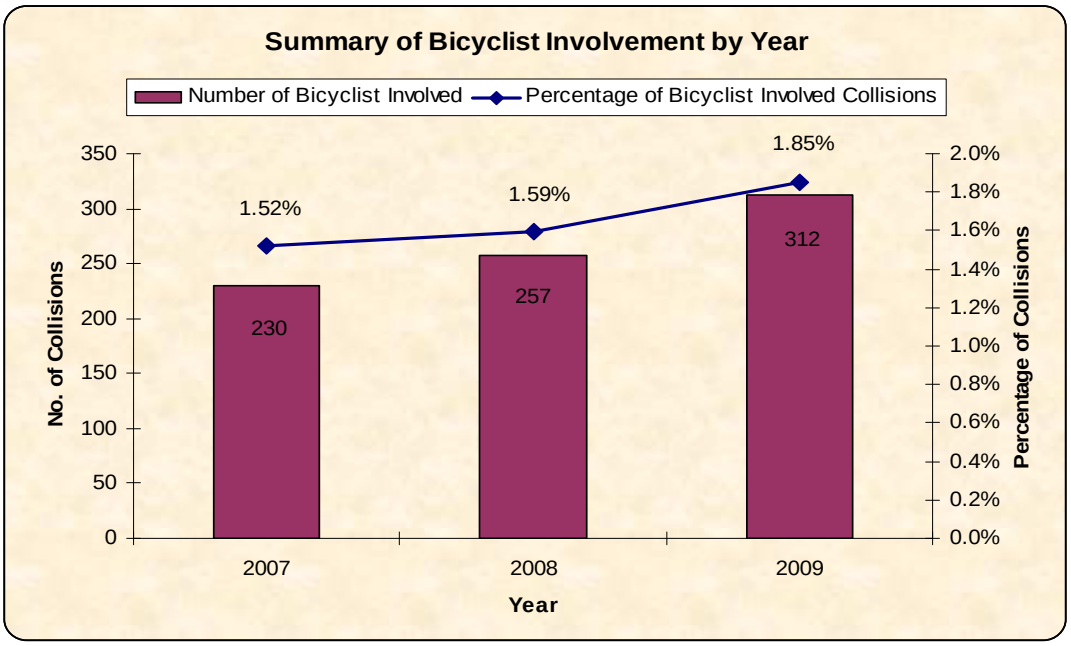

Figure 3.25 Summary of Bicyclist Involvement by Year

As shown in Table 3.15 and Figure 3.26, most of the crashes that involved bicyclists were observed in the 21-30 age group. In addition, the results in Figure 3.27 show that there was a modest decline in the percentage of crashes involving male bicyclists, while a modest increase was recorded for female bicyclists from 2007 through 2009.

Table 3.15 Bicyclist Involved by Age and Year

Age Group	No. of Bicyclist Involved			Percentage		
	2007	2008	2009	2007	2008	2009
Under 10	11	7	9	4.8%	2.7%	2.9%
11-20	29	31	23	12.6%	12.1%	7.4%
21-30	77	95	119	33.5%	37.0%	38.1%
31-40	40	44	57	17.4%	17.1%	18.3%
41-50	27	33	40	11.7%	12.8%	12.8%
51-60	25	20	25	10.9%	7.8%	8.0%
61-70	3	4	6	1.3%	1.6%	1.9%
Over 70	1	1	4	0.4%	0.4%	1.3%
Unknown	17	22	29	7.4%	8.6%	9.3%
Total	230	257	312	100.0%	100.0%	100.0%

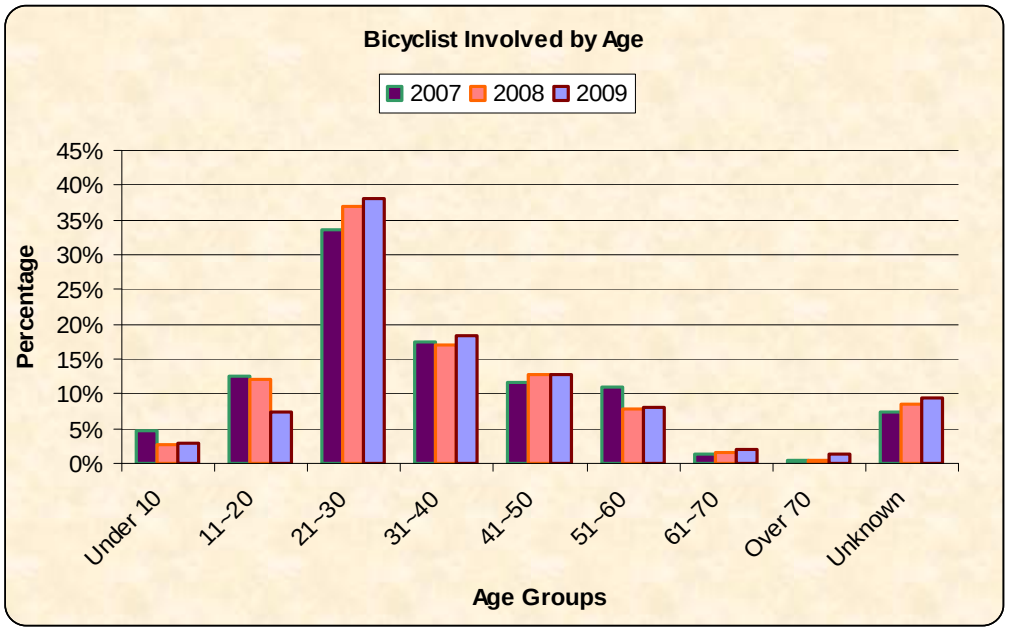

Figure 3.26 Bicyclist Involved by Age

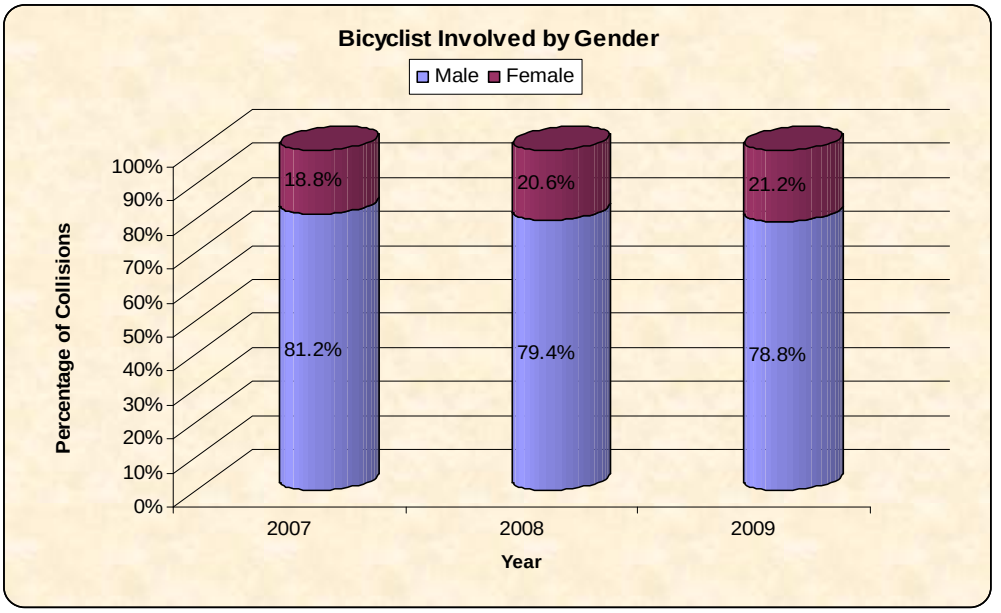

Figure 3.27 Bicyclist Involved by Gender

Table 3.16 Bicyclist Involved by Injury Code in 2009

Injury Code	Number
Fatal	0
Disabling	30
Non-Disabling	111
Complaint but not visible	84
Other	9
None	51
Unknown, N/A	27
Total	312

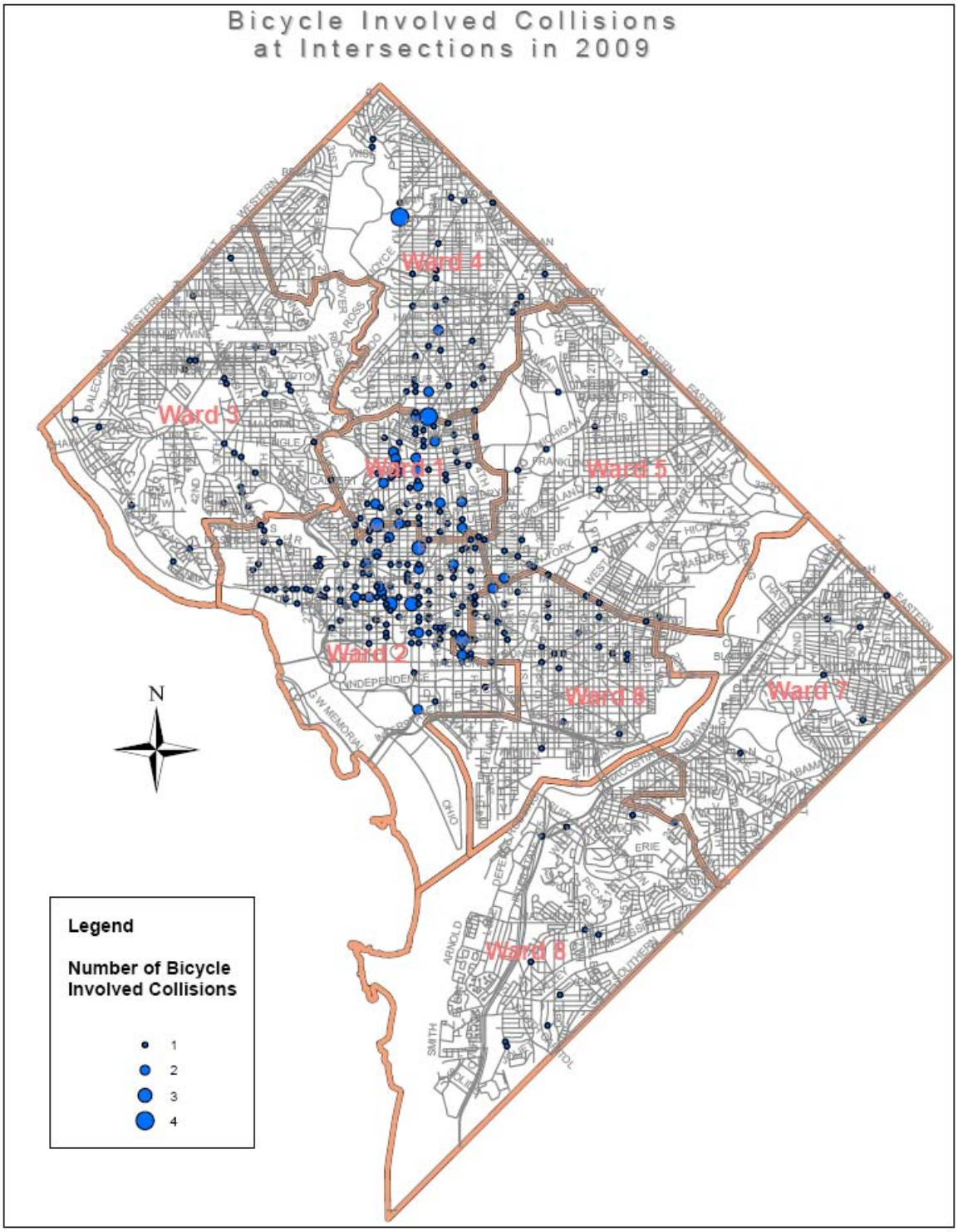

Figure 3.28 Bicycle Involved Collisions at Intersections in 2009

3.3.8 Motorcyclist Involved Collisions

According to the data from the Fatality Analysis Reporting System, approximately 13% of the total fatalities in the US involve motorcyclist. This section presents crashes involving motorcycles. Based on the results of the analysis presented in Figure 3.29 and Table 3.17, a general downward trend was observed with the total number of crashes involving motorcyclists in 2008 being the lowest as compared to years 2007 and 2009. As shown in Figure 3.30, the motorcyclists in the age group of 21-30 recorded the highest number of crashes in both 2008 and 2009. Also, the results in Figure 3.31 show that collisions involving motorcyclists by gender remained relatively the same over the 3-year duration.

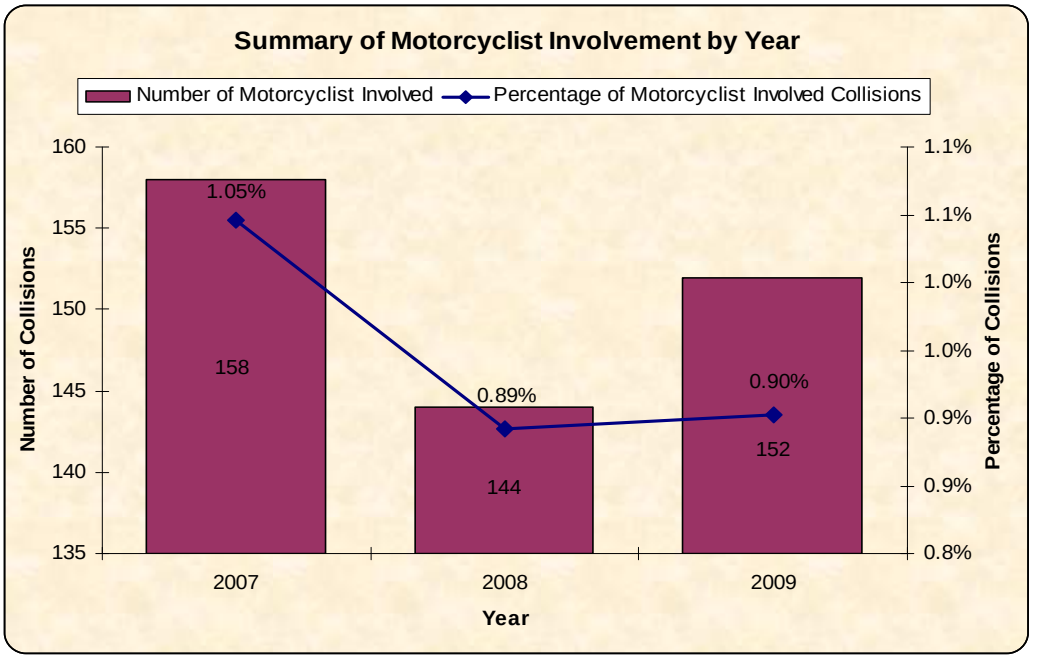

Figure 3.29 Summary of Motorcyclist Involvement by Year

Table 3.17 Motorcyclist Involved by Age and Year

Age Group	No. of Motorcyclist Involved			Percentage		
	2007	2008	2009	2007	2008	2009
Under 10	2	4	0	1.3%	2.8%	0.0%
11-20	25	6	13	15.8%	4.2%	8.6%
21-30	31	56	41	19.6%	38.9%	27.0%
31-40	39	28	32	24.7%	19.4%	21.1%
41-50	29	31	27	18.4%	21.5%	17.8%
51-60	12	5	7	7.6%	3.5%	4.6%
61-70	2	1	3	1.3%	0.7%	2.0%
Over 70	1	1	1	0.6%	0.7%	0.7%
Unknown	17	12	28	10.8%	8.3%	18.4%
Total	158	144	152	100.0%	100.0%	100.0%

Note: Both motorcyclists and passengers were included in this table.

Table 3.18 Motorcyclist Involved by Injury Code in 2009

Injury Code	Number
Fatal	4
Disabling	17
Non-Disabling	39
Complaint but not visible	34
Other	4
None	33
Unknown	21
Total	152

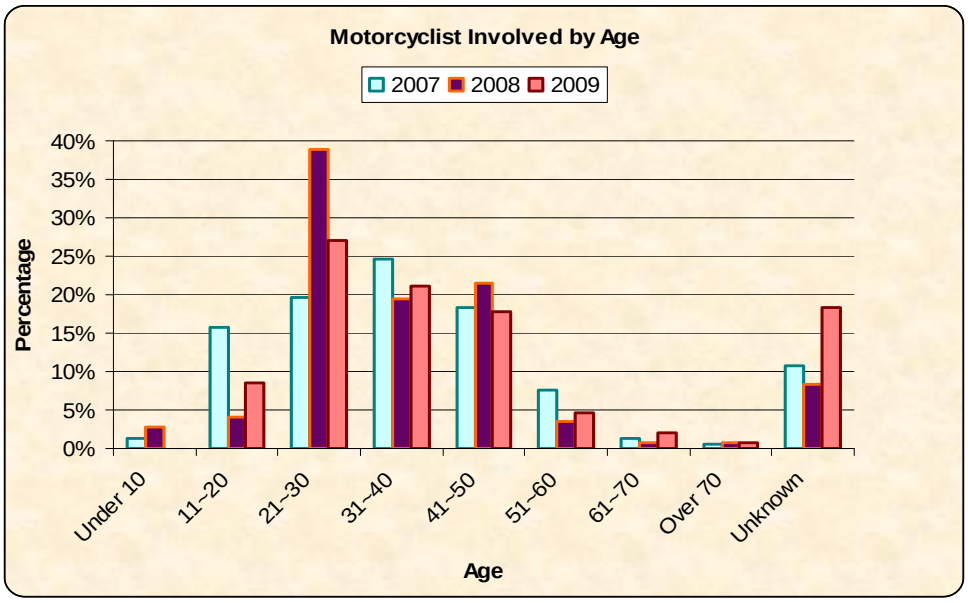

Figure 3.30 Motorcyclist Involved by Age

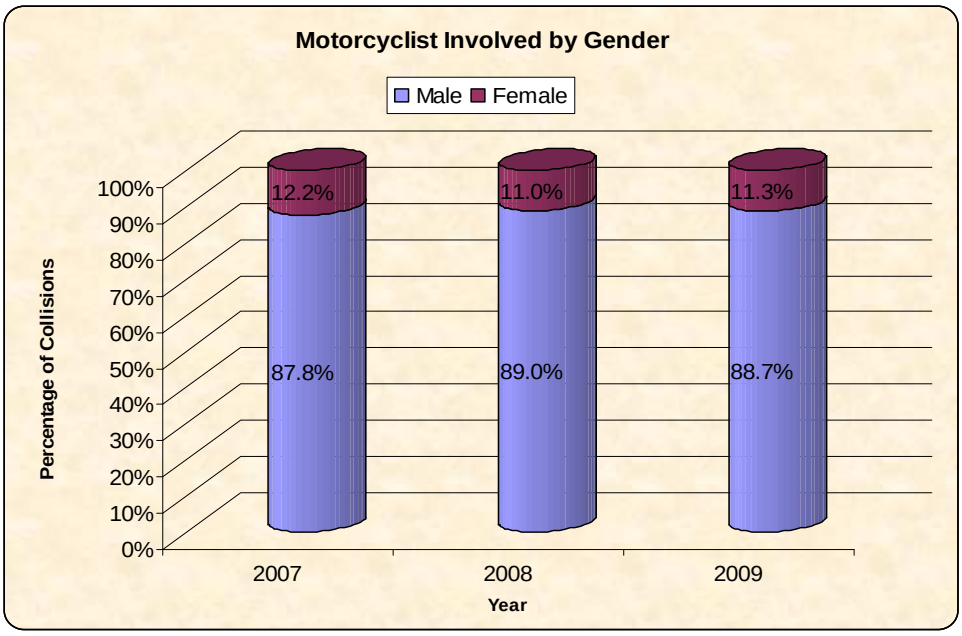

Figure 3.31 Motorcyclist Involved by Gender

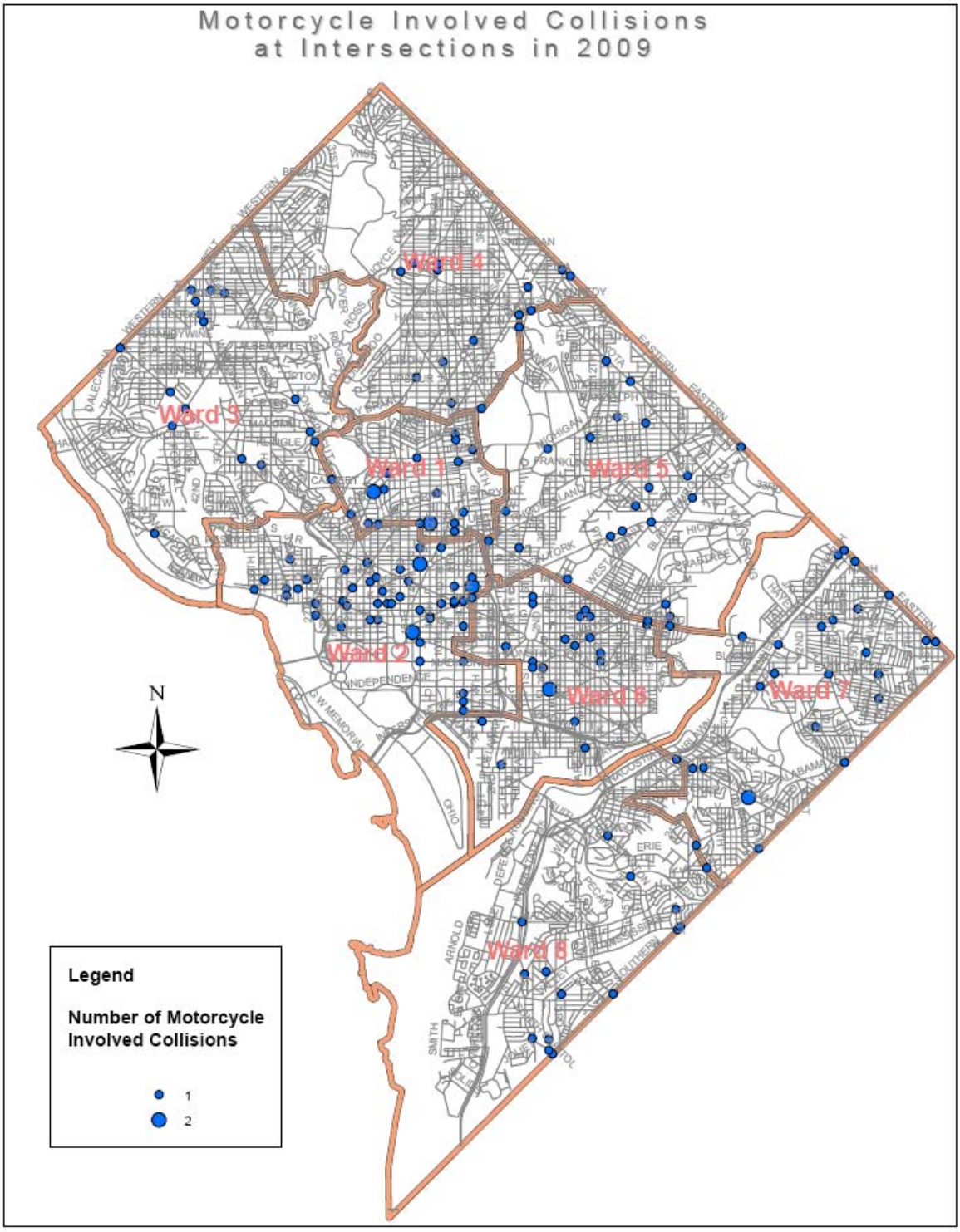

Figure 3.32 Motorcycle Involved Collisions at Intersections in 2009

3.4 The Driver

3.4.1 Drivers by Age

The age groups of drivers' involved in motor vehicle crashes continue to be important information for government agencies and local authorities to determine the appropriate crash prevention and mitigation strategies. Based on the results presented in Table 3.19 and Figure 3.33, it can be observed that the age group of 26-30 was found to be the highest crash involved drivers in 2009 followed by the age group of 21-25. The data also showed that approximately 17% of those involved in crashes was not recorded or were unknown.

Table 3.19 Number of Drivers Involved in Collisions by Age and Year

Age Group	No. of Drivers Involved in Collisions			Percentage		
	2007	2008	2009	2007	2008	2009
16-20	1,086	1,013	859	4.6%	4.1%	3.6%
21-25	2,637	2,562	2,438	11.2%	10.4%	10.1%
26-30	2,897	2,887	2,768	12.3%	11.7%	11.5%
31-35	2,471	2,356	2,299	10.5%	9.5%	9.5%
36-40	2,607	2,454	2,311	11.0%	9.9%	9.6%
41-45	2,273	2,178	2,096	9.6%	8.8%	8.7%
46-50	2,141	2,050	2,099	9.1%	8.3%	8.7%
51-55	1,655	1,587	1,663	7.0%	6.4%	6.9%
56-60	1,338	1,294	1,301	5.7%	5.2%	5.4%
61-65	720	720	811	3.0%	2.9%	3.4%
66-70	418	483	468	1.8%	2.0%	1.9%
71-75	269	274	247	1.1%	1.1%	1.0%
Over 75	336	300	622	1.4%	1.2%	2.6%
Unknown	2,772	4,593	4,139	11.7%	18.6%	17.2%
Total	23,620	24,751	24,121	100.0%	100.0%	100.0%

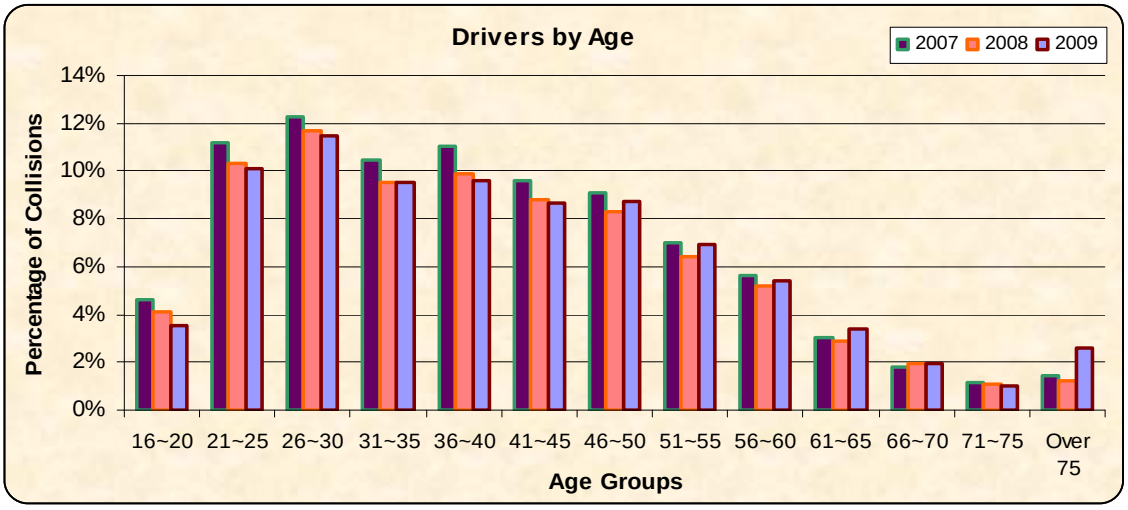

Figure 3.33 Number of Drivers Involved in Collisions by Age and Year

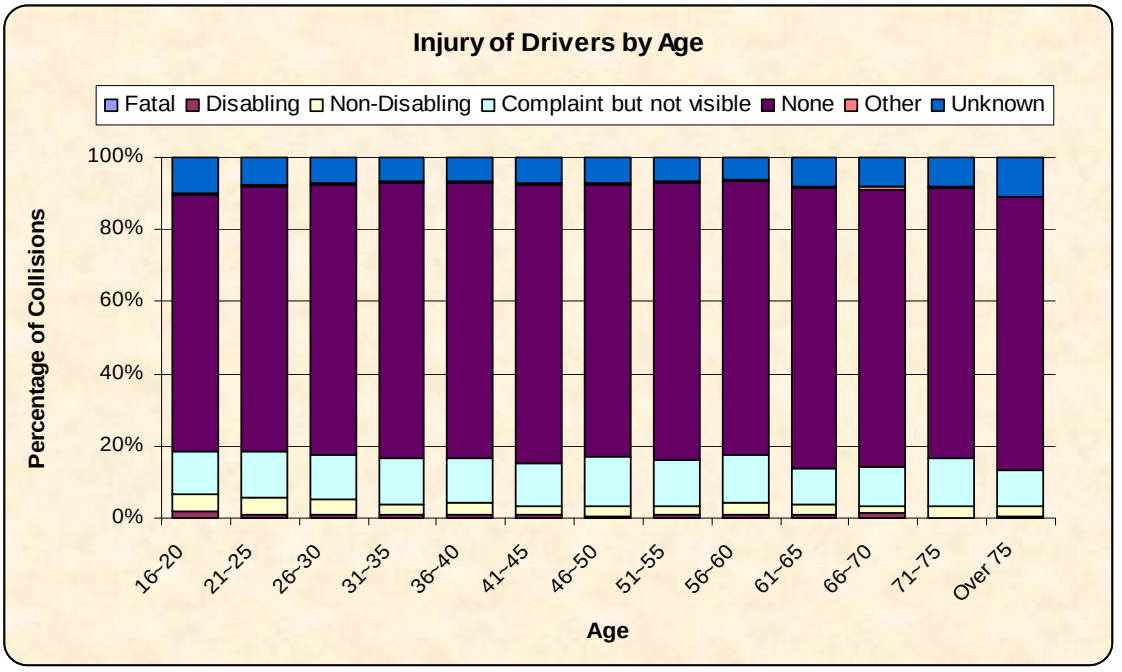

Figure 3.34 Injury of Drivers by Age in 2009

3.4.2 Drivers by Gender

Crashes recorded by the gender of drivers, as presented in Figure 3.35, show that the percentage of crashes for both male and female drivers remained relatively unchanged over the 3-year period.

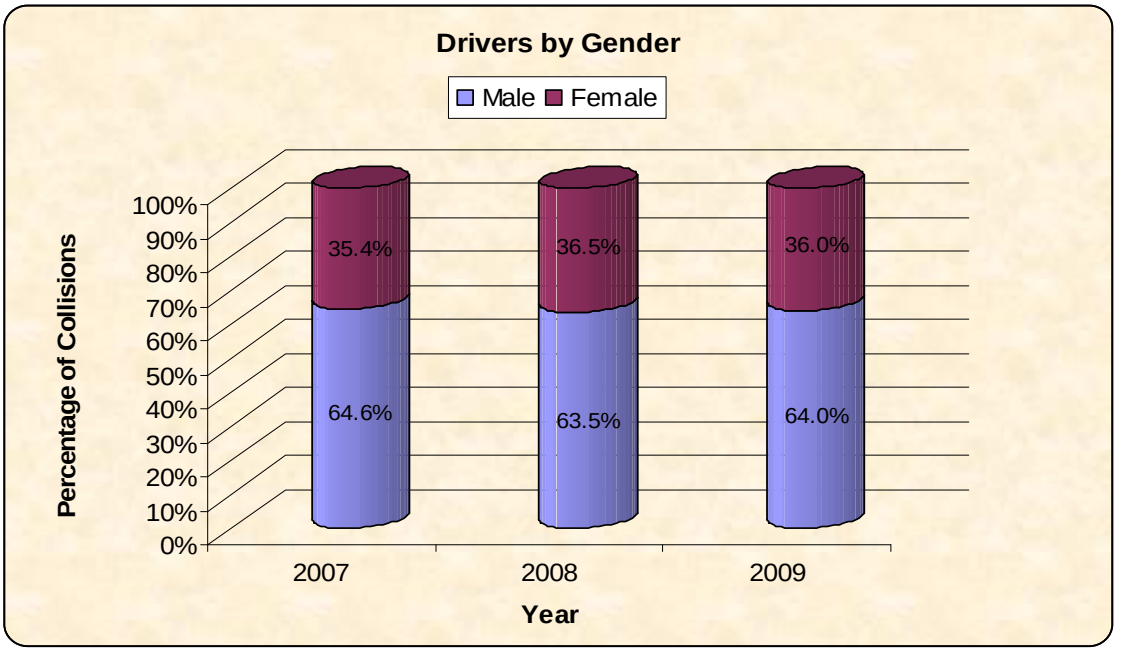

Figure 3.35 Drivers Involved in Collisions by Gender and Year

3.4.3 Drivers by State Issued License

As most commuters to DC live in Washington's outer suburbs or neighboring states such as Maryland and Virginia, it is of interest to determine the distribution of motor vehicle crashes based on drivers' state issued licenses. From Table 3.20 and Figure 3.36, it can be stated that the majority of crashes involved with Maryland drivers, followed by those from Washington, DC, with less than 30% of drivers classified as from Virginia, other states or government.

Table 3.20 Summary of Drivers Involved in Collisions by State Issued License

	No. of Drivers Involved in Collisions			Percentage		
	2007	2008	2009	2007	2008	2009
DC	6,855	8,783	9,004	29.0%	35.5%	37.3%
MD	7,531	9,184	9,478	31.9%	37.1%	39.3%
VA	2,644	3,348	3,440	11.2%	13.5%	14.3%
Other	1,525	1,813	1,642	6.5%	7.3%	6.8%
Unknown	5,065	1,623	557	21.4%	6.6%	2.3%
Total	23,620	24,751	24,121	100.0%	100.0%	100.0%

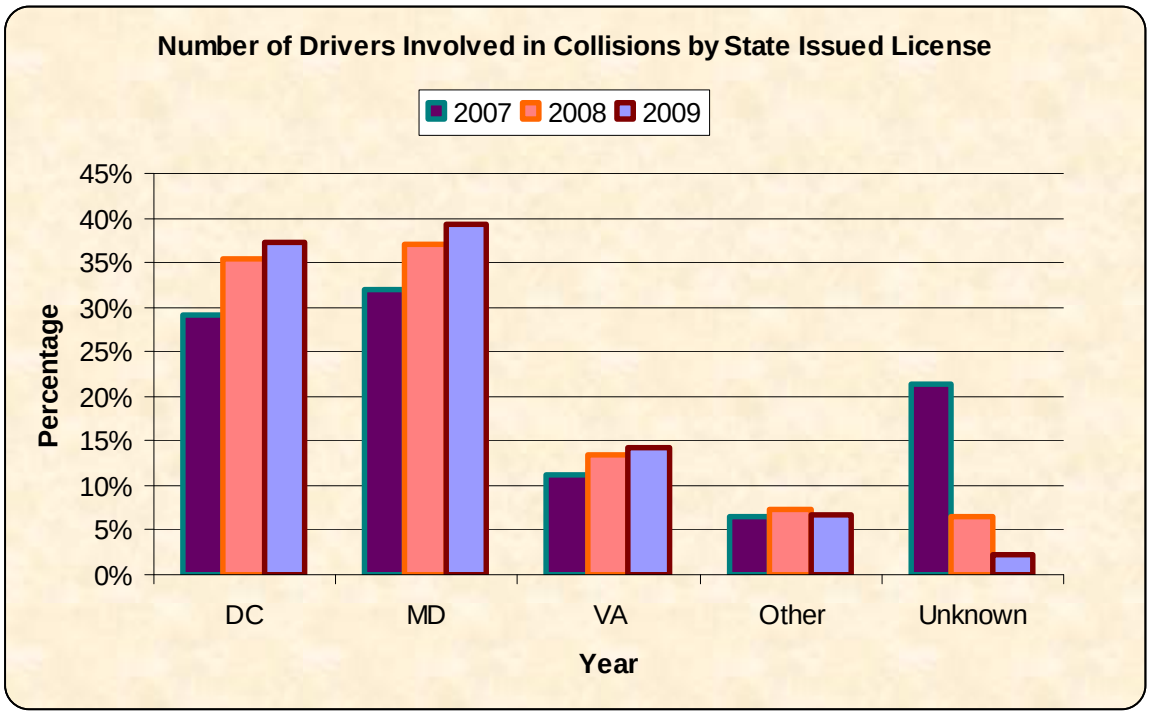

Figure 3.36 Number of Drivers Involved in Collisions by State Issued License

3.4.4 Drivers by Action

Education, enforcement, and engineering are three key tools that are used to improve traffic safety. As drivers are required to make numerous driving decisions for very different roadway situations, it is of interest to examine whether drivers were at fault or not at fault for a particular motor vehicle crash in order to enhance the level of safety and provide improvements.

As indicated in Table 3.21, drivers going straight, turning left, and changing lanes were the three most frequently reported crashes caused by driver's actions from 2007 through 2009. On the other hand, drivers avoiding obstacles, running off road, stopping or standing at the traffic lane, and overtaking were found to be the four least reported drivers' faults recorded on the traffic crash reports.

Table 3.21 Driver Involvement by Driver Action and Year

Driver by Action*	2007	2008	2009
Going Straight	6,730	6,974	6,394
Turning Left	1,680	1,796	1,656
Changing Lanes	1,145	1,216	1,009
Turning Right	761	917	858
Backing	801	968	822
Entering/Leaving Parked Position	336	388	380
Slowing/Stopping	278	302	351
Merging	244	276	284
Making U-turn	282	308	267
Parked	338	496	263
Overtaking	157	204	238
Stop/Stand Traffic Lane	244	283	231
Ran Off Road	230	251	218
Avoiding	114	135	152
Total	13,340	14,514	13,123

* Drivers reported as "No Violation" or the drivers' action was not recorded were not included in this table.

3.5 Environmental Conditions

3.5.1 Collisions by Roadway Type

Presented in Table 3.22 and Figure 3.37 is a summary of collisions by road type. From the results, crashes recorded as straight, level, and curved roadways were the three most frequently reported roadway types from 2007 to 2009. In contrast, the least recorded crash type from 2007 to 2009 was under pass roadways.

Table 3.22 Summary of Collisions by Roadway Type

Roadway Type	2007			2008			2009		
	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries
Bridge	68	0	53	80	0	47	75	0	36
Crest	72	3	42	70	0	49	58	0	19
Curve	733	6	275	847	2	305	739	3	300
Grade	728	1	354	631	5	289	589	2	255
Level	792	1	326	636	4	278	631	3	270
Other	190	0	60	276	1	85	225	1	75
Ramp	91	0	40	97	0	44	85	0	36
Straight	12,144	17	5,304	13,256	16	5,590	10,813	16	4,293
Underpass	13	0	10	15	0	7	19	0	6
Unknown	275	26	107	239	11	98	3,607	8	1,239
Total	15,106	54	6,571	16,147	39	6,792	16,841	33	6,529

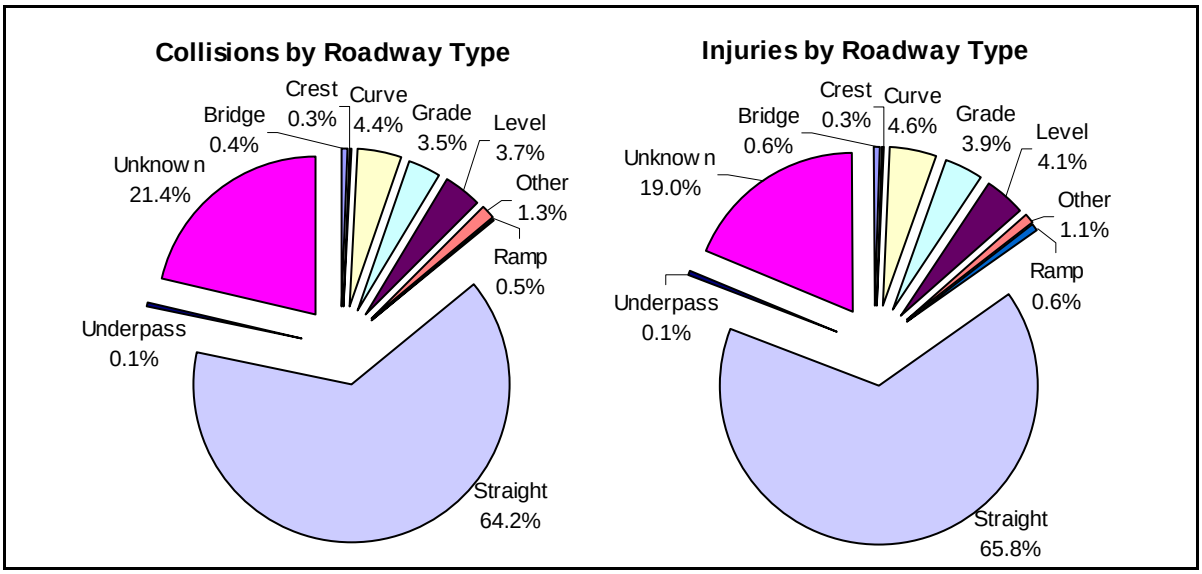

Figure 3.37 Collisions and Injuries by Roadway Type in 2009

3.5.2 Collisions by Roadway Conditions

From Table 3.23 and Figure 3.38, the highest number of crashes was reported to have occurred on dry road conditions. From the results, it can be stated that approximately 75% of the total motor vehicle crashes in 2009 occurred on dry roadways. The second highest (2,961 crashes) occurred on wet pavements which represents approximately 18% of the total crashes in 2009.

Table 3.23 Summary of Collisions by Road Condition

Road Condition	2007			2008			2009		
	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries
Dry	12,390	18	5,479	13,051	24	5,527	12,641	30	5,020
Ice/Snow	423	2	135	65	0	32	311	0	75
Repairing	23	0	3	68	0	18	75	0	22
Wet	1,816	8	844	2,381	4	1,063	2,961	3	1,199
Other	0	0	0	35	1	15	140	0	50
Unknown	454	26	110	547	10	137	713	0	163
Total	15,106	54	6,571	16,147	39	6,792	16,841	33	6,529

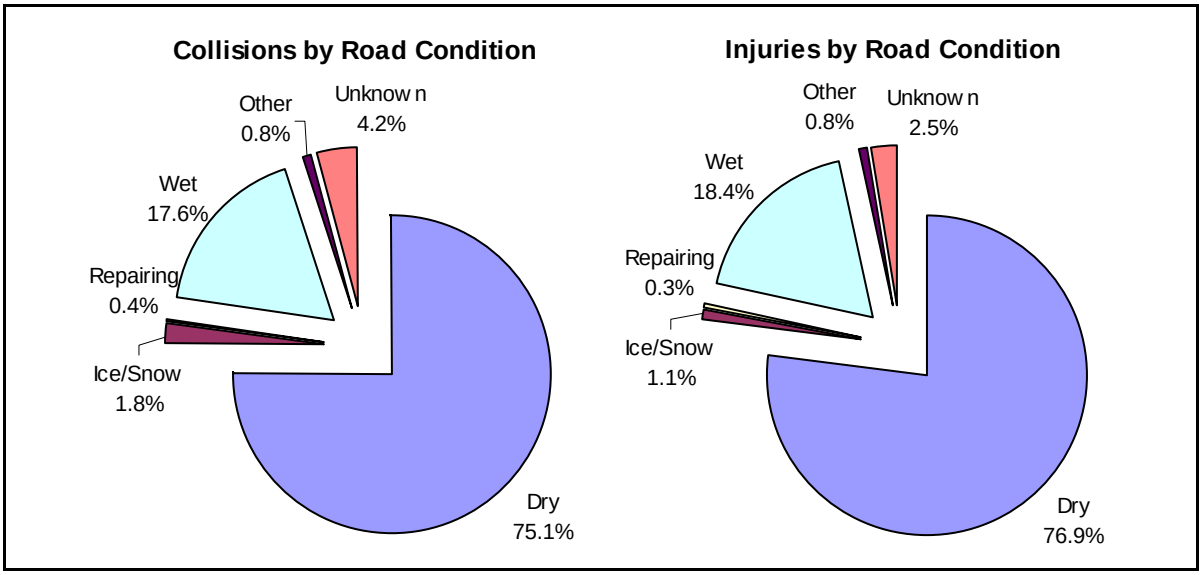

Figure 3.38 Collisions and Injuries by Road Condition in 2009

3.5.3 Collisions by Road Surface

As observed from Table 3.24 and Figure 3.39, it can be stated that from 2007 to 2009, crashes occurred most frequently on asphalt and concrete roadways. The results also show that approximately 89% (14,982) of the total crashes occurred on asphalt roadways in 2009. This is followed by crashes on concrete surface, which constitutes approximately 8% (or 1,376) of the total reported motor vehicle collisions in 2009. As shown in Figure 3.40, the accidents with concrete surface comprised of the highest number of reported collisions and injuries per lane-mile in 2009.

Table 3.24 Summary of Collisions by Roadway Surface

Roadway Surface	2007			2008			2009		
	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries
Asphalt	13,802	27	6,000	14,441	24	6,078	14,982	29	5,853
Brick	14	0	8	38	0	10	34	0	7
Concrete	1,071	1	484	1,381	4	589	1,376	3	522
Dirt	10	0	4	16	0	9	19	1	3
Gravel	21	0	4	43	0	12	28	0	7
Other	40	0	11	43	1	22	35	0	7
Unknown	148	26	60	185	10	72	367	0	130
Total	15,106	54	6,571	16,147	39	6,792	16,841	33	6,529

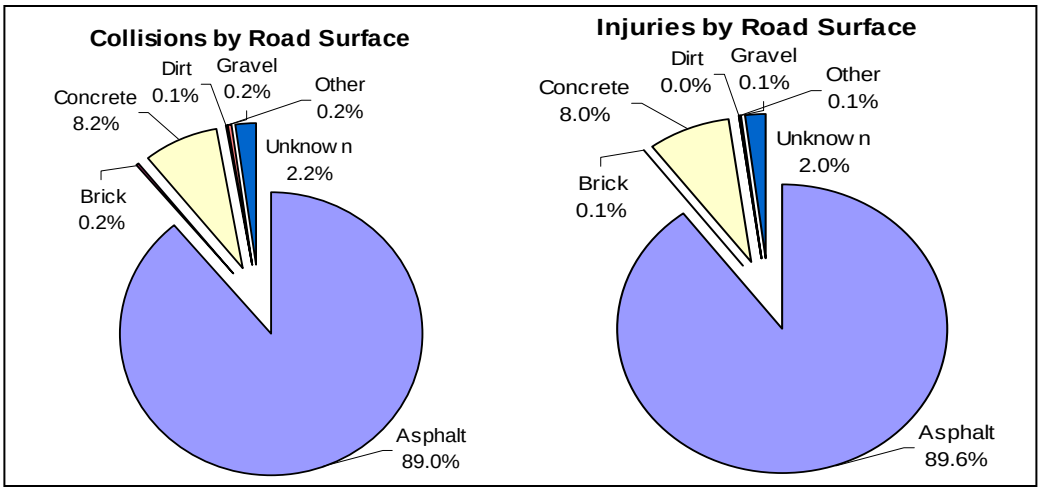

Figure 3.39 Collisions and Injuries per Lane-mile by Road Surface in 2009

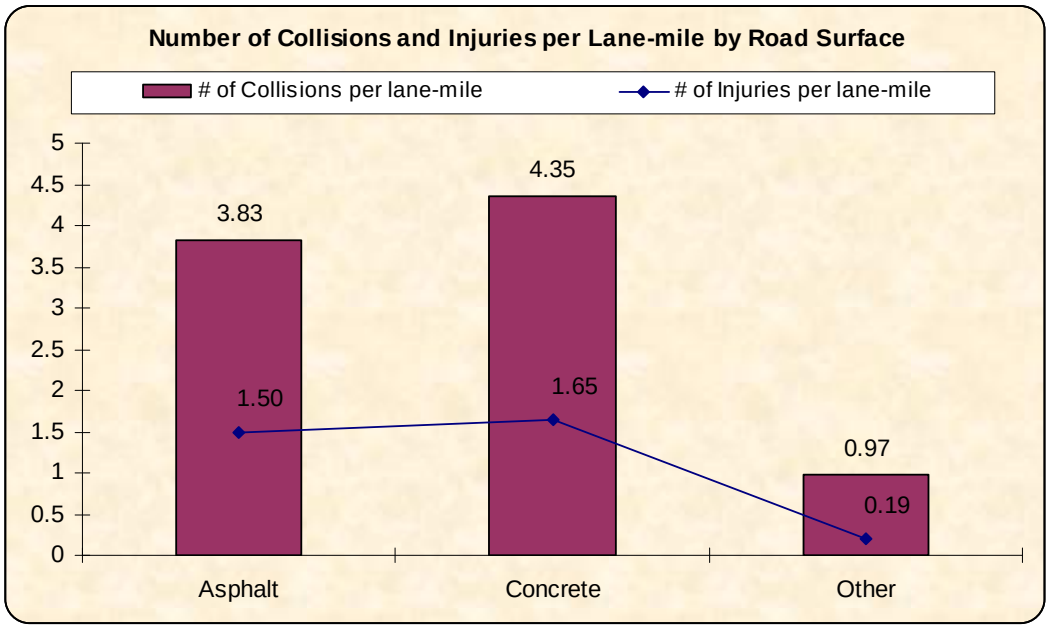

Figure 3.40 Collisions and Injuries per Lane-mile by Road Surface in 2009

3.5.4 Collisions by Roadway Functional Classification

As streets and highways are categorized into different systems, it is pertinent to assess the interrelationship of roadway functional classification and motor vehicle crashes. For the purpose of this report, it is of interest to examine the speed-related motor vehicle crashes and injuries by roadway functional classification. As shown in Table 3.25 and Figures 3.41 and 3.42, the number of injuries for all roadway functional systems from 2007 through 2009 showed a descending trend, with the exception of Interstate where an increase was observed.

Table 3.25 Summary of Collisions by Roadway Functional Classification

Road Condition	2007			2008			2009		
	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries
Collector	1,990	2	826	2,073	2	851	2,200	2	801
Interstate	348	0	196	527	2	290	589	1	326
Local	4,156	8	1,486	4,049	5	1,314	4,169	5	1,137
Minor Arterial	4,260	9	2,072	4,520	19	2,095	4,644	10	2,042
Other Freeway & Expressway	128	0	77	375	5	231	160	3	80
Principal Arterial	4,157	8	1,858	4,323	6	1,897	4,770	12	2,004
Unknown	67	27	56	280	0	114	309	0	139
Total	15,106	54	6,571	16,147	39	6,792	16,841	33	6,529

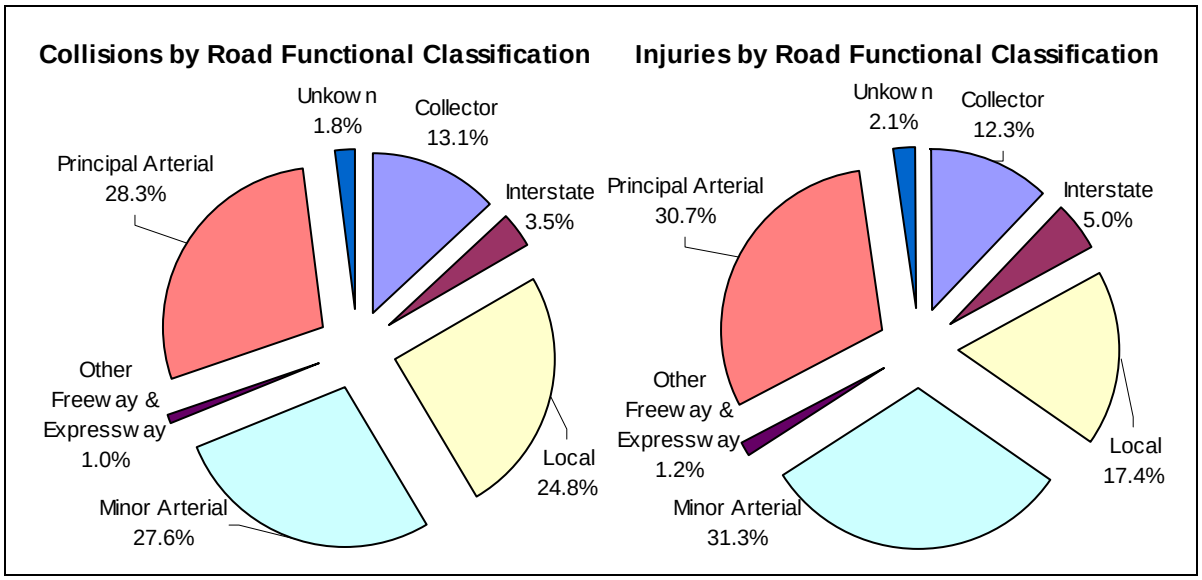

Figure 3.41 Collisions and Injuries by Roadway Functional Classification in 2009

Table 3.26 Type of Collisions by Roadway Functional Classification

Type of Collision	Interstate	Other Freeway and Expressway	Principal Arterial	Minor Arterial	Local	Collector	Unknown	Total
Backing Hit Moving Veh.	1	1	51	71	117	41	1	283
Backing Hit Parked Veh.	3	1	80	110	205	63	2	464
Backing Hit Pedestrian	0	0	20	17	18	6	1	62
Fixed Object	52	25	167	198	234	98	35	809
Head On	13	3	112	123	108	79	5	443
Left Turn Hit Pedestrian	0	0	80	72	42	38	2	234
Left Turn Hit Vehicle	2	9	431	435	227	178	12	1,294
Non-Collision Accident	7	0	18	19	8	5	1	58
Other	18	1	228	241	187	125	12	812
Override	0	0	4	8	2	1	0	15
Parked Vehicle	1	2	178	274	631	198	8	1,292
Ran Off Roadway	36	5	52	58	63	29	13	256
Rear End	313	69	1,313	1,013	494	350	115	3,667
Right Angle	12	3	477	513	416	286	10	1,717
Right Turn Hit Pedestrian	0	1	33	27	20	12	0	93
Right Turn Hit Vehicle	3	1	181	209	132	90	4	620
Side Swiped	114	31	1,132	1,018	1,050	475	73	3,893
Straight Hit Pedestrian	2	3	116	122	99	65	1	408
Underride	0	0	1	0	0	1	0	2
Unknown	12	5	96	116	116	60	14	419
Total	589	160	4,770	4,644	4,169	2,200	309	16,841

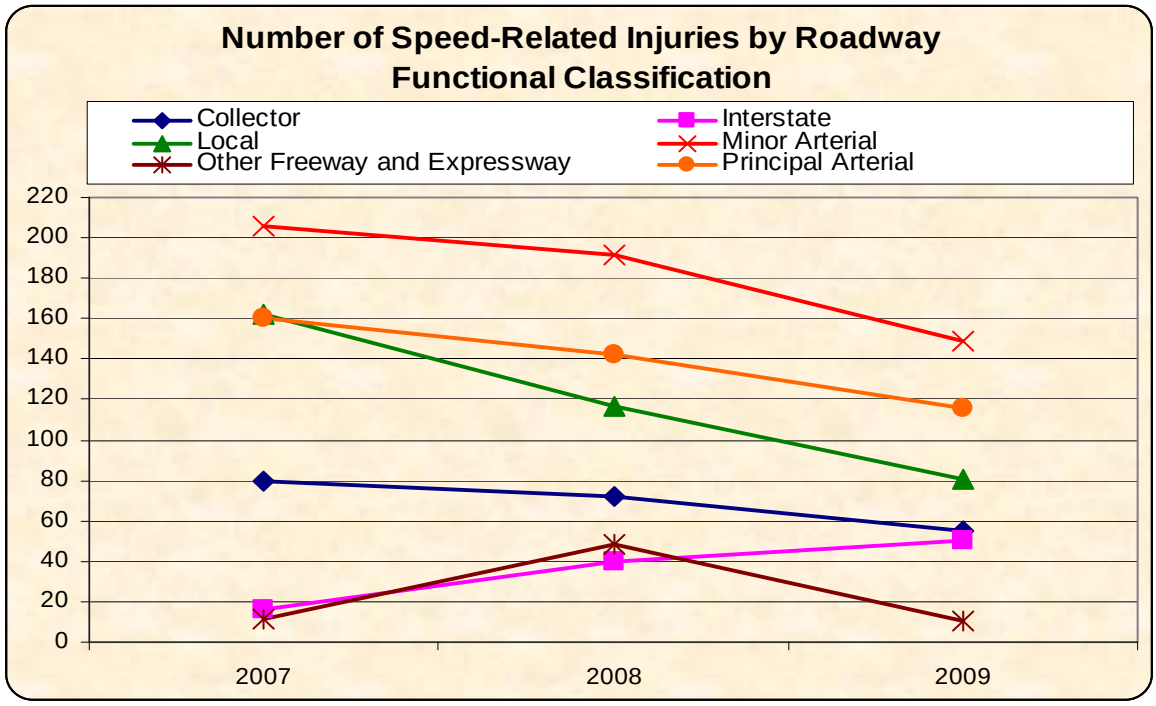

Figure 3.42 Number of Speed-Related Injuries by Roadway Functional Classification

Figure 3.43 shows number of collisions and injuries per Lane-Mile by Road Functional Classification in 2009. The highest number of collisions and injuries per lane-mile was reported on the group of principal arterial.

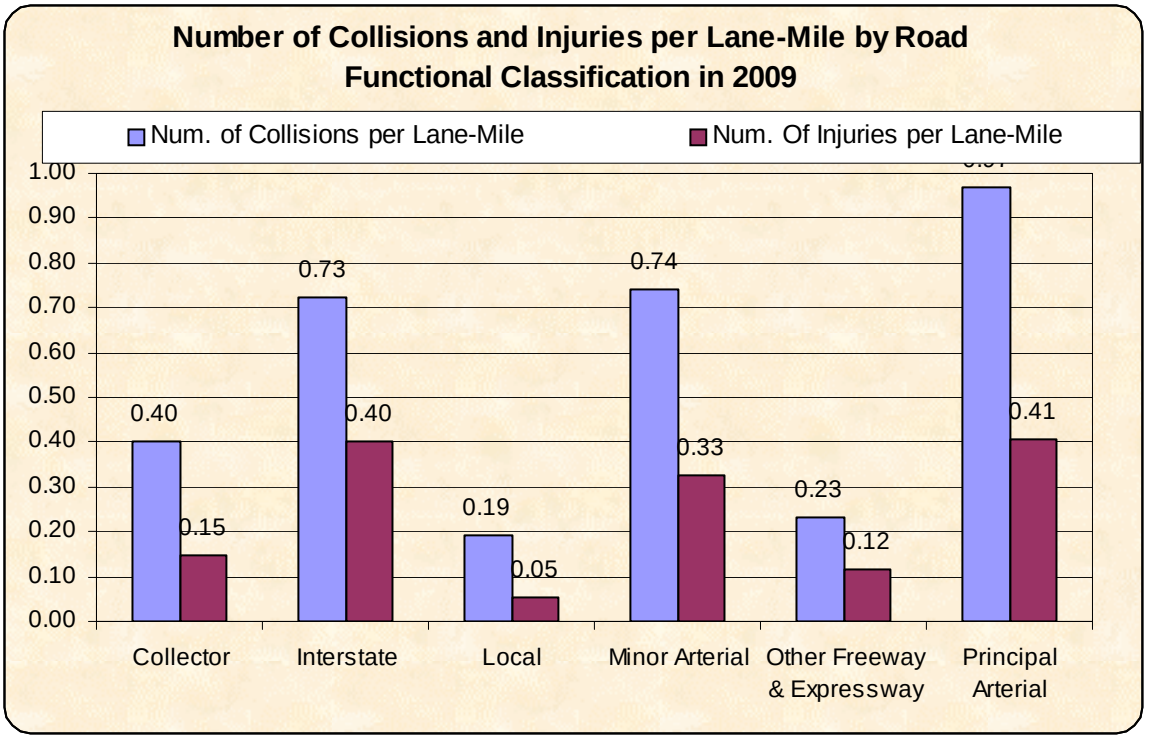

Figure 3.43 Number of Collisions and Injuries per Lane-Mile by Roadway Functional Classification in 2009

3.5.5 Collisions by Weather Conditions

In general, it is assumed that adverse weather conditions contribute to motor vehicle crashes. Table 3.27 and Figure 3.44 show the summary of weather-related crashes by severity type. From the results, it is observed that majority of the crashes occurred during clear weather conditions. These collisions comprise of about 76% (or 12,763) of the total motor vehicle crashes in 2009. This is followed by crashes occurring during rainy conditions, which represents approximately 14% (or 2,383) of the total crashes in 2009.

Table 3.27 Summary of Collisions by Weather Condition

Weather Condition	2007			2008			2009		
	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries
Clear	12,470	20	5,497	12,963	26	5,468	12,763	32	5,079
Fog/Mist	161	3	76	207	0	99	281	0	130
Rain	1,343	5	619	1,986	3	893	2,383	1	947
Sleet	73	0	35	38	0	12	56	0	18
Snow	301	0	108	67	0	20	317	0	82
Other	0	0	0	172	0	89	302	0	110
Unknown	758	26	236	714	10	211	739	0	163
Total	15,106	54	6,571	16,147	39	6,792	16,841	33	6,529

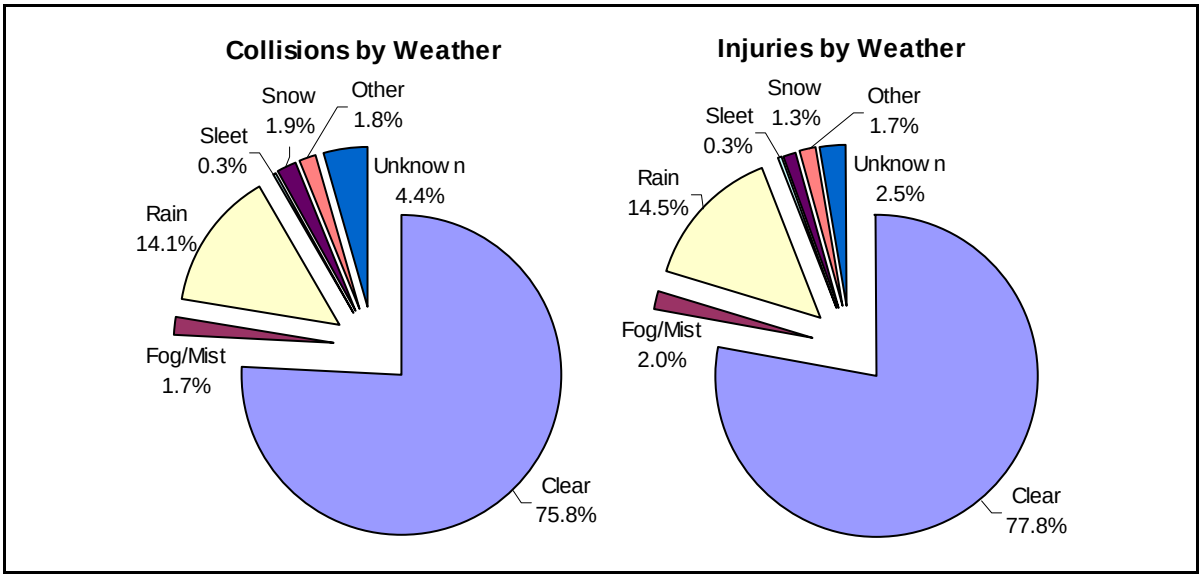

Figure 3.44 Collisions and Injuries by Weather in 2009

3.5.6 Collisions by Light Conditions

Presence of street illumination is another important factor for determining the causes of motor vehicle crashes. As shown in Table 3.28 and Figure 3.45, the majority of reported crashes occurred on roadways where the streetlights were off. These collisions occurred under such conditions in approximately 56% of the total reported crashes in 2009. Approximately 34% (5,757) of the total reported motor vehicle crashes in 2009 occurred on roadways where no street illumination was provided.

Table 3.28 Summary of Collisions by Street Lighting

Street Lighting	2007			2008			2009		
	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries
Street Lights On	5,099	17	2,213	5,428	17	2,312	5,757	19	2,165
Street Lights Off	8,448	7	3,847	8,959	9	3,894	9,351	13	3,807
Defective	6	0	4	29	0	14	31	0	9
Unknown	800	30	216	925	11	227	991	1	235
None	753	0	291	806	2	345	711	0	313
Total	15,106	54	6,571	16,147	39	6,792	16,841	33	6,529

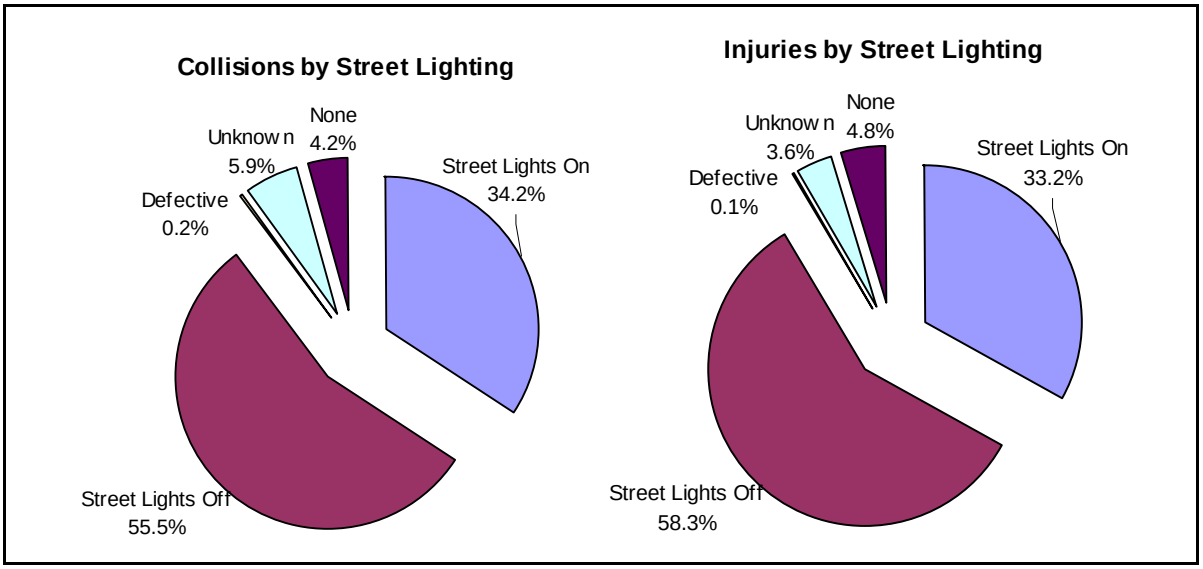

Figure 3.45 Collisions and Injuries by Street Lighting in 2009

Furthermore, as shown in Table 3.29 and Figure 3.46, the majority of motor vehicle crashes occurred during daylight conditions. These crashes consisted of approximately 60% (10,157) of the total reported motor vehicle crashes in 2009. About 33% (5,498) of the total reported crashes occurred in the dark, which resulted in 21 fatalities and 2,060 injuries in 2009.

Table 3.29 Summary of Collisions by Light Condition

Light Condition	2007			2008			2009		
	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries
Dark	4,699	18	2,049	5,270	18	2,200	5,498	21	2,060
Dawn/Dusk	725	3	299	576	0	251	475	0	193
Daylight	9,201	7	4,108	9,747	10	4,226	10,157	12	4,131
Unknown	481	26	115	554	11	115	711	0	145
Total	15,106	54	6,571	16,147	39	6,792	16,841	33	6,529

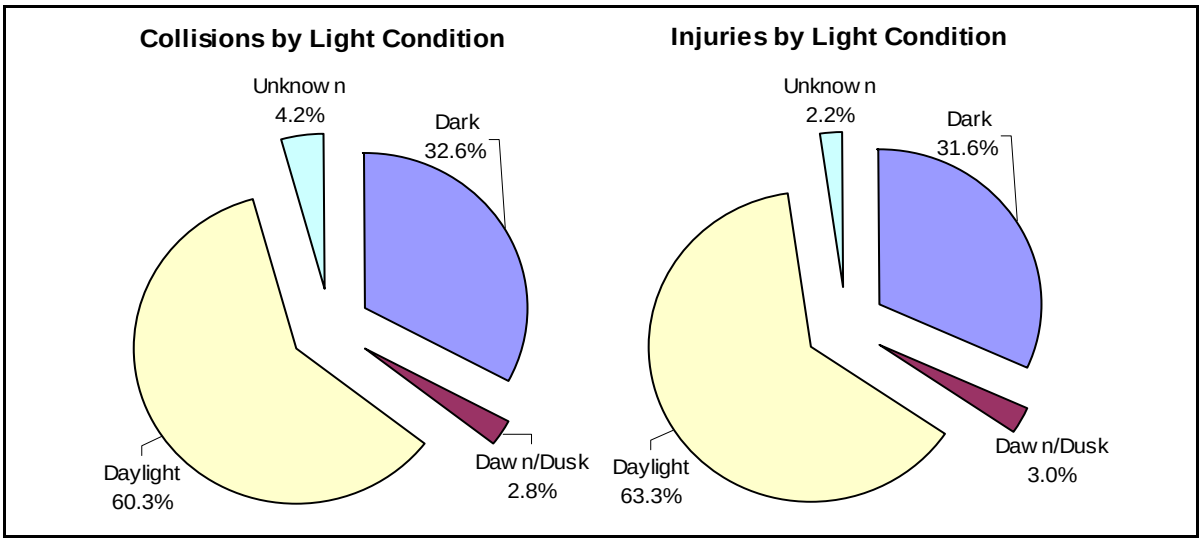

Figure 3.46 Collisions and Injuries by Light Condition in 2009

3.5.7 Collisions by Traffic Conditions

Traffic conditions are another new data field that was appended on the new traffic crash reports (PD-10 forms) to obtain the traffic volume conditions at the time of crash. This information was based on police officer's observation of the traffic conditions. The summary of this information is presented in Table 3.30 and Figure 3.47. From the results, medium (5,779) and light (5,435) traffic conditions respectively represented approximately 34% and 32% of the total reported crashes in 2009.

Table 3.30 Summary of Collisions by Traffic Condition

Traffic Condition	2007			2008			2009		
	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries
Heavy	2,612	3	1,341	2,771	3	1,338	2,991	1	1,289
Medium	5,261	5	2,619	5,344	11	2,517	5,779	8	2,534
Light	5,210	17	2,047	5,404	13	2,191	5,435	22	1,976
Other	339	0	0	345	2	61	245	0	42
Unknown	1,684	29	564	2,283	10	685	2,391	2	688
Total	15,106	54	6,571	16,147	39	6,792	16,841	33	6,529

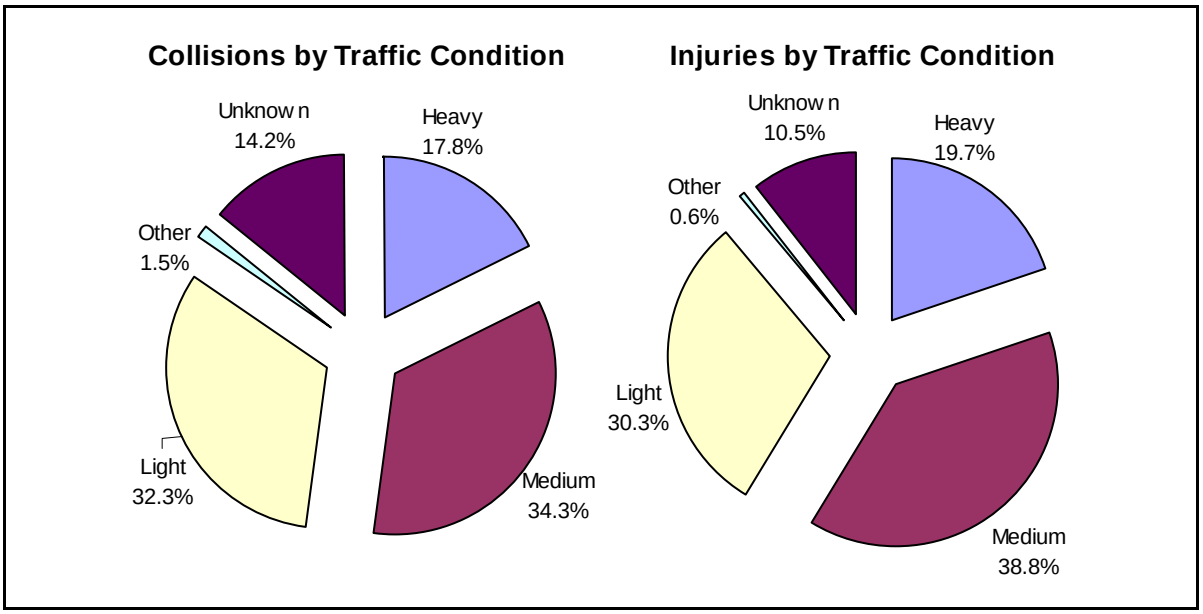

Figure 3.47 Collisions and Injuries by Traffic Condition in 2009

3.5.8 Collisions by Traffic Control

Traffic control devices provide important safety guidance to vehicles and pedestrians. The summary of crashes by the presence and type of traffic control device is presented in Table 3.31 and graphically in Figure 3.48 for 2009. From the results, approximately 39% of crashes were reported to have occurred at or close to a signalized intersection, yet only 22% of intersections in DC are signalized (1,700 out of 7,700).

Table 3.31 Summary of Collisions by Traffic Control

Traffic Control	2007			2008			2009		
	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries
Signal	5,693	12	2,899	6,173	10	3,104	6,559	13	2,976
None	6,846	12	2,414	7,249	15	2,481	7,545	19	2,423
Stop Sign	1,529	2	860	1,552	1	815	1,578	0	742
Other	444	1	174	532	3	204	505	1	202
Unknown	594	27	224	641	10	188	654	0	186
Total	15,106	54	6,571	16,147	39	6,792	16,841	33	6,529

* Traffic control field options flashing, yield, officer, and restricted turn were combined into the category of "Other".
* Mid-block crashes were included in the "None" traffic control group.

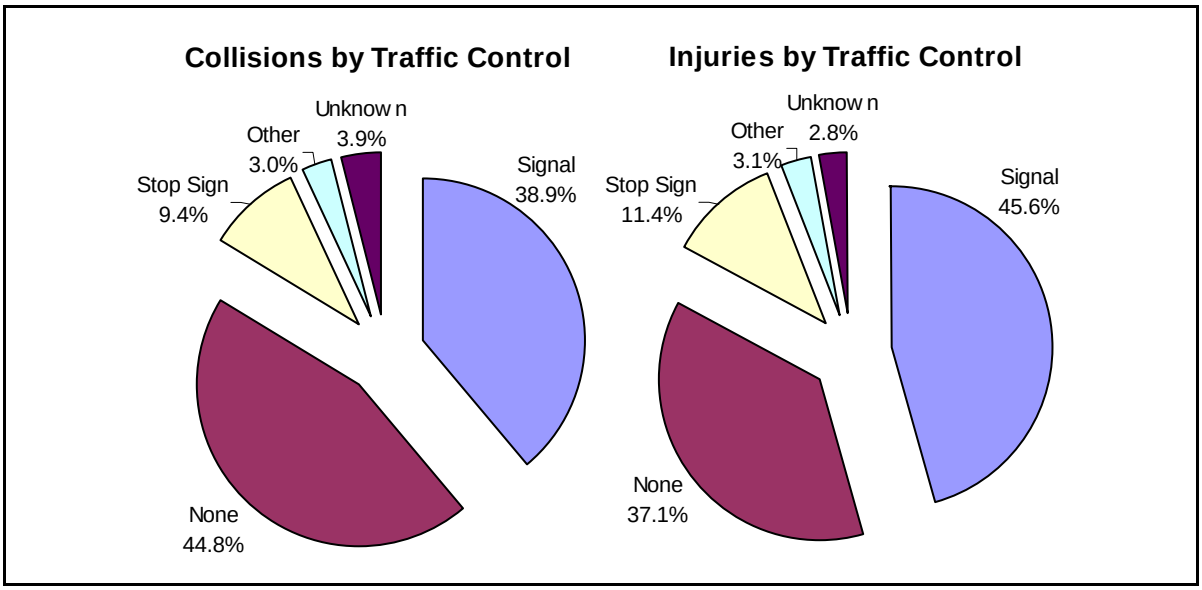

Figure 3.48 Collisions and Injuries by Traffic Control in 2009

3.6 Contributing Circumstance

3.6.1 Collisions by Primary Crash Contributing Factors

Table 3.32 shows a summary of all reported contributing factors for crashes in DC from 2007 through 2009. Except for "No violation" and "Other", the prominent contributing factors to crashes reported in 2009 included driver inattention, following too closely, and changing lanes without caution.

Table 3.32 Number of Collisions by Contributing Factors

Contributing Factor	Number of Collisions			Percentage		
	2007	2008	2009	2007	2008	2009
No Violation	12144	12718	14827	45.09%	45.84%	52.96%
Other	4063	4509	3556	15.09%	16.25%	12.70%
Driver Inattention	2266	2439	2488	8.41%	8.79%	8.89%
Following too Close	1240	1293	1245	4.60%	4.66%	4.45%
Changing Lanes without Caution	1027	1115	1051	3.81%	4.02%	3.75%
Auto/Pedestrian Right of Way	1743	1505	992	6.47%	5.42%	3.54%
Speed	1132	1016	815	4.20%	3.66%	2.91%
Red Light Violation*	0	301	453	0.00%	1.08%	1.62%
Improper Backing	469	473	428	1.74%	1.70%	1.53%
Alcohol/Drug Influence	263	306	390	0.98%	1.10%	1.39%
Improper Passing	304	432	376	1.13%	1.56%	1.34%
Stop Sign	260	238	227	0.97%	0.86%	0.81%
Pedestrian Violation	256	225	201	0.95%	0.81%	0.72%
Other Distraction*	0	0	196	0.00%	0.00%	0.70%
Open Door to Traffic	123	158	158	0.46%	0.57%	0.56%

Wrong Way/Side of Street	178	155	130	0.66%	0.56%	0.46%
Driver Vision Obstructed	69	90	112	0.26%	0.32%	0.40%
Road Defects	34	21	92	0.13%	0.08%	0.33%
Defective Brakes, Lights, etc.	88	76	74	0.33%	0.27%	0.26%
Cell Phone/Other Electronic Device*	0	26	70	0.00%	0.09%	0.25%
Yield Sign	23	29	37	0.09%	0.10%	0.13%
Flashing/Directional Light	41	58	28	0.15%	0.21%	0.10%
Right Turn on Red	13	22	26	0.05%	0.08%	0.09%
Fail to Set Parking Brake	18	21	22	0.07%	0.08%	0.08%
Improper Turn**	682	328	0	2.53%	1.18%	0.00%
Stop/Go Light	473	181	0	1.76%	0.65%	0.00%
Improper Starting**	21	11	0	0.08%	0.04%	0.00%
Pedestrian Drunk	6	2	0	0.02%	0.01%	0.00%
Total	26930	27746	27994	100.00%	100.00%	100.00%

* Newly included contributing factor in the new PD-10 form since May 2008
**Deleted contributing factor in the new PD-10 form since May 2008

3.6.2 Speed Violation Related Collisions

Speed is always a major contributiing factor to high severity crashes. In this report, the total motor vehicle crashes were divided into specific groups to identify the correlation between speed and collision severity level. The summary of crashes based on speeding is presented in Figure 3.49. The result shows that 4.8% of the total collisions were speed violation related, which resulted in 21.2% of the total fatalities and 11.5% of the total disabling injuries.

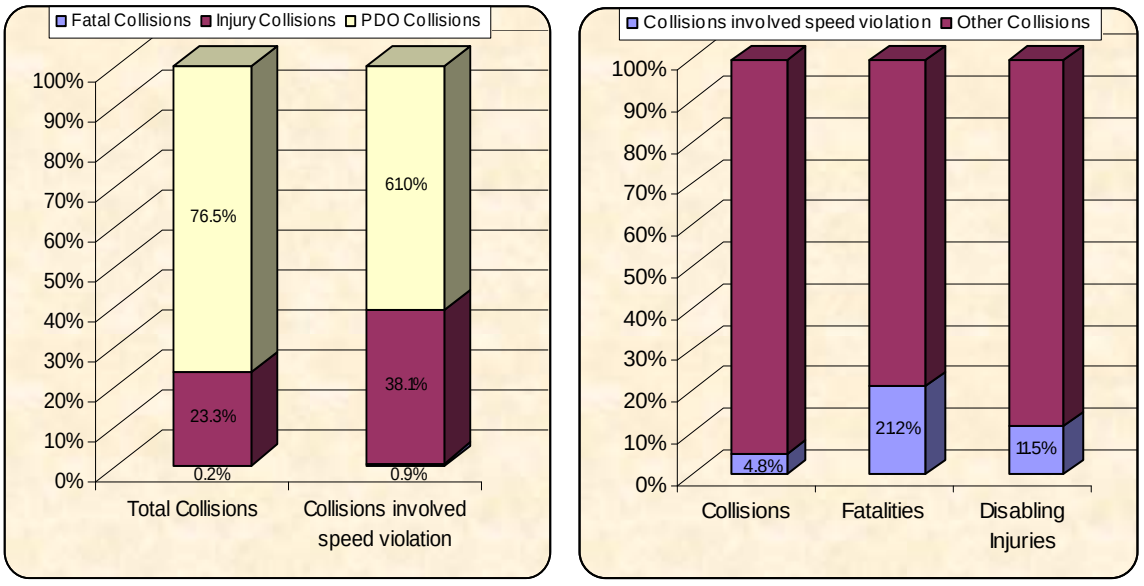

Figure 3.49 Collision Severity Involved Speed Violation in 2009

Table 3.33 Driver Involved Speed Violation by Gender and Age Group in 2009

Age Group	Female	Male	Unknown	Total
16-21	16	78	1	95
21-25	40	74	0	114
26-30	25	66	0	91
31-35	14	53	0	67
36-40	11	50	0	61
41-45	8	32	0	40
46-50	12	30	0	42
51-55	10	20	0	30
56-60	6	12	0	18
61-65	5	10	0	15
66-70	6	1	1	8
71-75	1	1	0	2
Over 75	3	6	0	9
Unknown	7	47	169	223
Total	164	480	171	815

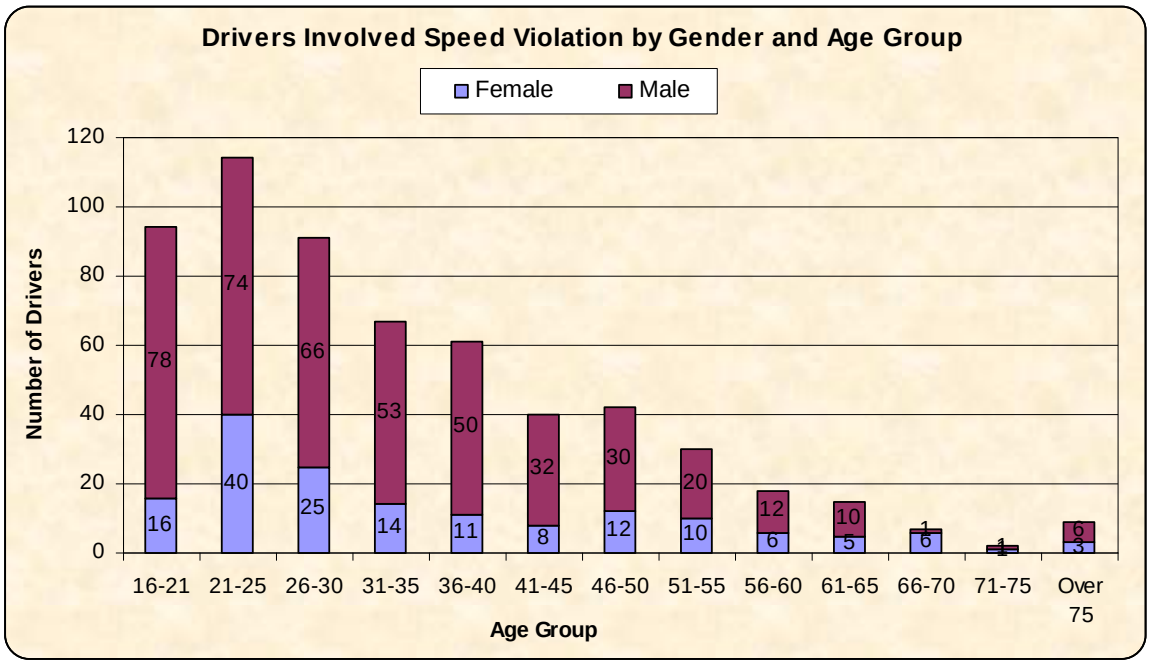

Figure 3.50 Driver Involved Speed Violation by Gender and Age Group in 2009

As shown in Table 3.33 and Figure 3.50, young drivers and male drivers were reported as high group of drivers involved in speed violations.

3.6.3 Alcohol/Drug Related Collisions

The use of alcohol and drugs has been noted to be one of the most significant contributory factors in the cause of crashes. As shown in Table 3.34 and Table 3.35, more alcohol/drug related collisions were reported during the night and weekend.

Table 3.34 Alcohol/Drug related Collisions by Hour in 2009

Hour	Number of Alcohol Related Collisions
00	47
01	28
02	51
03	42
04	18
05	5
06	2
07	3
09	2
11	2
12	3
13	5
14	5
15	6
16	12
17	13
18	29
19	16
20	14
21	19
22	31
23	32

Table 3.35 Alcohol/Drug related Collisions by Day of Week in 2009

Day of Week	Number of Alcohol Related Collisions
Monday	40
Tuesday	37
Wednesday	33
Thursday	44
Friday	55
Saturday	95
Sunday	81

As shown in Table 3.36 and Figure 3.51, young drivers and male drivers were reported as high group of drivers involved in alcohol/drug violations.

Table 3.36 Drivers Involved Alcohol/Drug Violation by Gender and Age Group in 2009

Age Group	Female	Male	Unknown	Total
16-21	6	17	0	23
21-25	16	60	0	76
26-30	25	53	0	78
31-35	9	40	0	49
36-40	9	25	0	34
41-45	5	29	0	34
46-50	9	19	0	28
51-55	5	16	0	21
56-60	1	14	1	16
61-65	1	5	0	6
66-70	0	3	0	3
71-75	0	0	1	1
Over 75	1	0	0	1
Unknown	2	5	13	20
Total	89	286	15	390

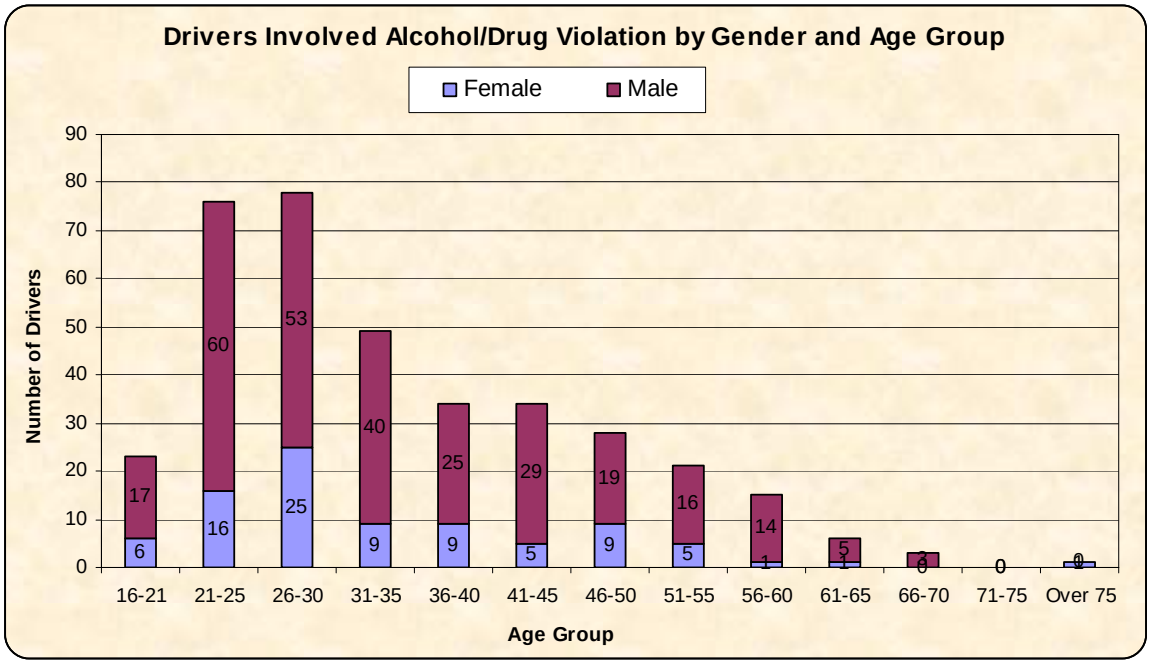

Figure 3.51 Drivers Involved Alcohol/Drug Violation by Gender and Age Group in 2009

3.6.4 Collisions by Restraint Use (Seatbelts or Airbags)

As shown in many past research studies, restraint device usage has a significant influence on the injury severity of a crash. Overall, the results presented in Table 3.37 shows that

approximately 3% (741) of crashes in 2009 were reported as air bag failed. Table 3.37 and Figure 3.52 show the summary of air bag usage by severity type.

Table 3.37 Number of Injures by Injury Code and Air Bag Restraint in 2009

Air Bag Restraint	Fatal	Disabling	Non-Disabling	Complaint but not visible	No Injury	Unknown	Total
Airbag Deployed	4	69	254	453	826	205	1,811
Airbag Installed	2	58	231	1,499	10,518	874	13,182
Airbag Failed	0	5	35	95	558	48	741
Other	0	2	5	10	104	16	137
Side-Impact Airbags	0	1	5	16	30	9	61
Use Unknown	0	57	207	527	4,186	1,808	8,189
Total	6	192	737	2,600	16,222	2,960	24,121

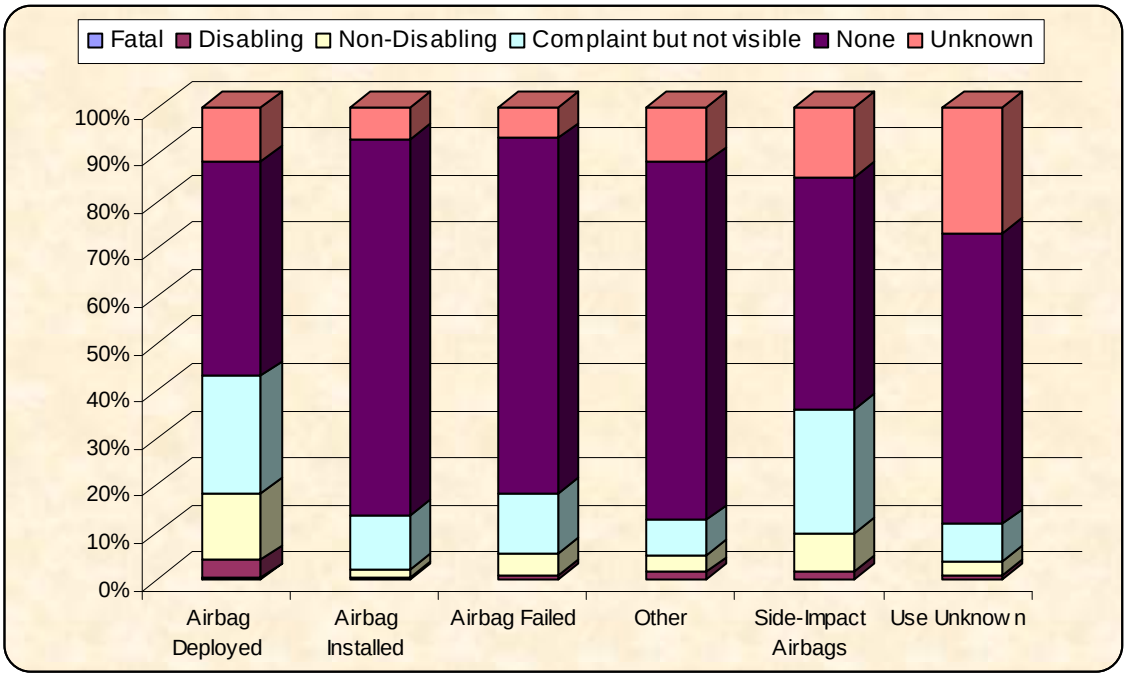

Figure 3.52 Collision Severity by Air Bag Restraint in 2009

The use of seat belts is another important safety restraint in preventing injuries in motor vehicle crashes. The analysis focused on assessing the correlation of severity of motor vehicle crashes and seat belts usage. The results are presented in Table 3.38 and Figure 3.53. From the results presented, in 2009, approximately 49% (11,729) of drivers or passengers involved in crashes used their seat belts. Approximately 47% (11,450) of drivers or passengers involved in crashes were reported with unknown seat belt usage.

Overall, only a small fraction (or approximately 2%) of drivers or passengers were reported with seat belt not installed or fastened.

Table 3.38 Number of Injuries by Injury Code and Seat Belt and Other Restraint in 2009

Seat Belt/Other	Fatal	Disabling	Non-Disabling	Complaint but not visible	No Injury	Unknown	Total
Belt Failed	0	2	10	27	220	26	285
Child Restraint	0	0	0	2	4	3	9
Fastened	1	88	312	1,563	9,210	555	11,729
Helmet	0	16	39	32	29	11	127
Not Fastened	3	11	27	41	192	25	299
Not Installed	0	11	25	20	103	38	197
Other	0	1	6	0	13	5	25
Use Unknown	2	63	318	915	6,451	2,297	11,450
Total	6	192	737	2,600	16,222	2,960	24,121

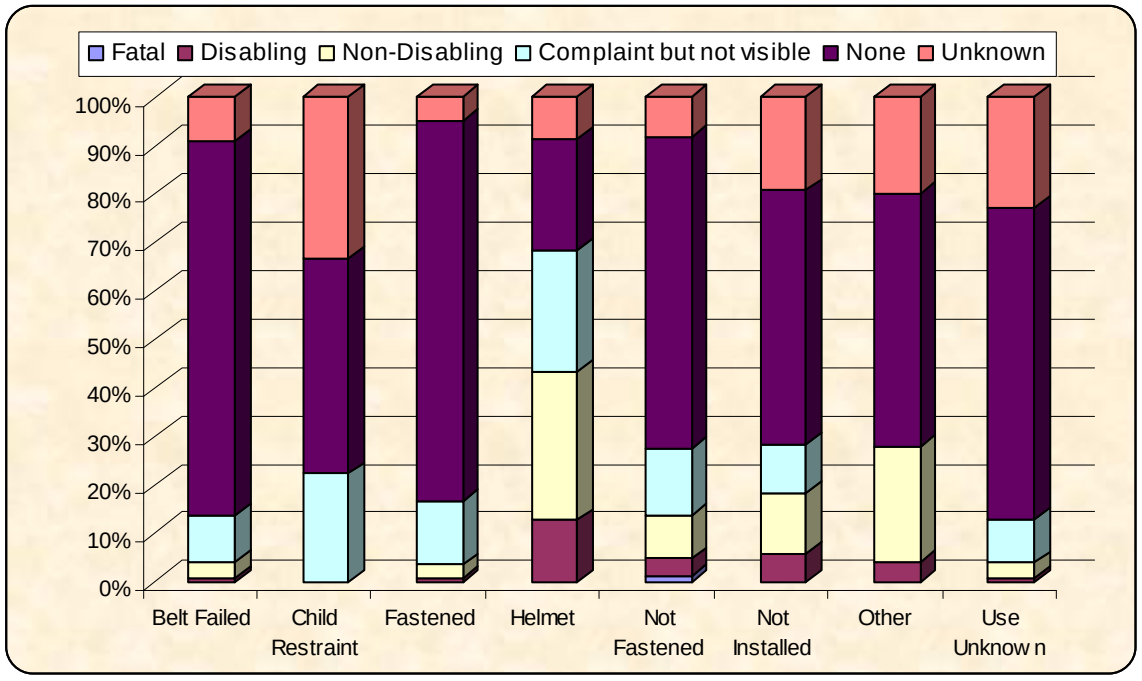

Figure 3.53 Collision Severity by Seat Belt Restraint in 2009

3.6.5 Collisions by Sobriety

The summary of crashes by sobriety is presented in Table 3.39 and Figure 3.54. It can be noted from the results that 11,466 (or approximately 65%) of drivers or passengers involved in a crash in 2009 were recorded as sober driving (or "had not been drinking" in the PD-10 form), whereas 4,652 (or approximately 27%) of drivers or passengers were determined to be impairment unknown. Overall, only a small fraction of drivers or

passengers were reported as driving while intoxicated (DWI) or driving while ability impaired (DWAI).

Table 3.39 Number of Collisions by Sobriety in 2009

Sobriety	Fatal Collisions	Injury Collisions	PDO Collisions	Total
Ability Impaired	4	83	121	208
Had Been Drinking and Obviously Drunk	0	70	170	240
Had Not Been Drinking	14	3,581	7,871	11,466
Impairment Unknown	28	969	3,655	4,652
Not Impaired	0	152	277	429
Other	2	169	355	526

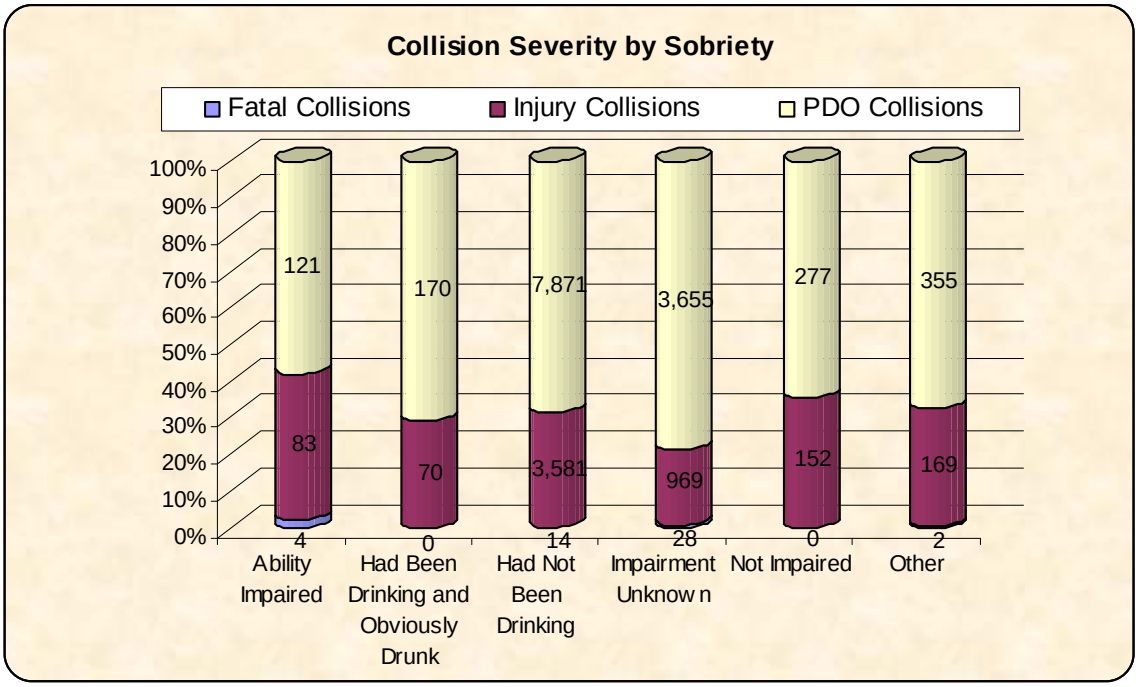

Figure 3.54 Collision Severity by Sobriety in 2009

3.6.6 Collisions by Driver or Pedestrian Distractions

Causes and severity of distraction-related collisions in the District are presented in Table 3.40 and Figure 3.55. The most prominent distraction clearly identified by the crash reports was the use of cell phones, while the highest cause of distraction-related crashes was reported as other.

Table 3.40 Number of Collisions by Driver or Pedestrian Distractions in 2009

Distraction	Fatal Collisions	Injury Collisions	PDO Collisions	Total
Cell Phone (hand held)	0	88	147	235
Cell phone (hands-free)	0	15	33	48
Distracted by passenger(s)	0	37	79	116
Eating	0	5	7	12
Interacting with pets	0	4	11	15
Interacting with unsecured cargo	0	8	12	20
Other	2	396	669	1,067
Personal Grooming	0	3	4	7
Reading	0	9	8	17
Using personal communication technologies	0	5	15	20
Writing	0	1	2	3
Total	2	571	987	1,560

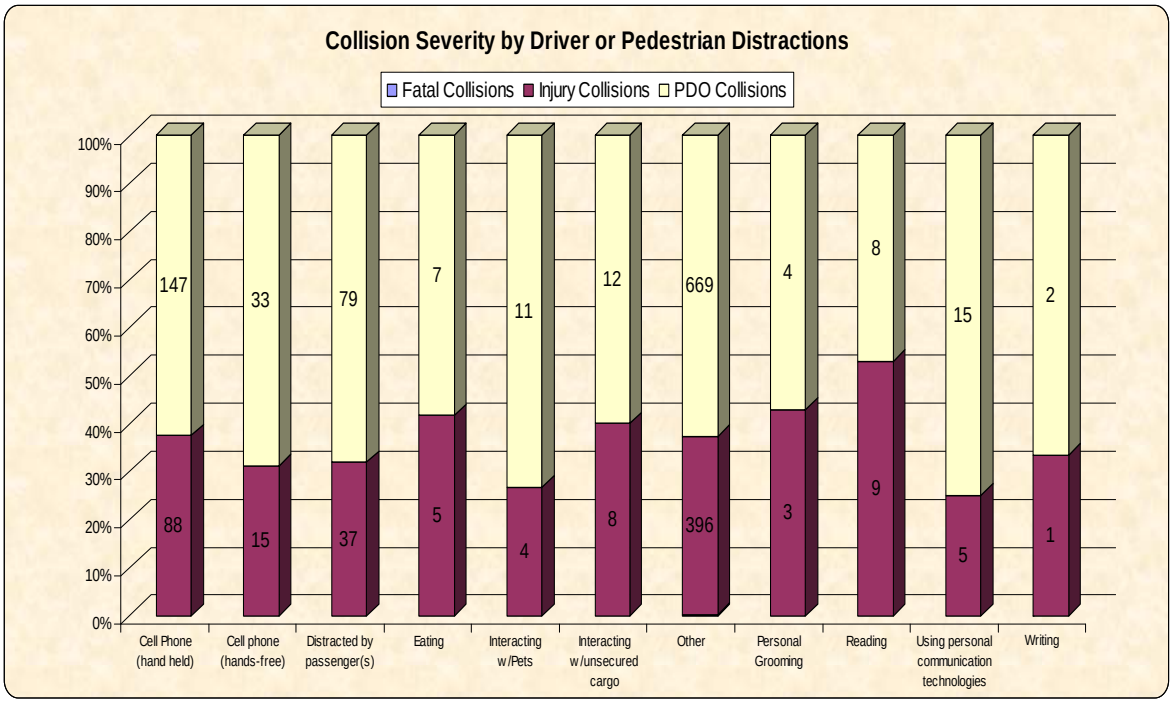

Figure 3.55 Collision Severity by Driver or Pedestrian Distractions in 2009

CHAPTER 4 HIGH FREQUENCY CRASH LOCATIONS

4.1 Methodology

This report provides a comprehensive overview of the city-wide traffic collisions data, and identification and analysis of high frequency crash locations and patterns from 2007 through 2009. For the identification and analysis of high crash locations, the report used several statistical methods to identify and rank the locations with the highest number of crashes based on different assumptions.

In order to accurately identify the true characteristics of street intersections or corridors, this report utilized step-by-step computational procedures to examine the crash experience. As the first step of the crash analysis procedure, crash occurrences, rates and severity were computed on the basis of the raw number of crashes, traffic volumes, and crash severity classes. These statistics served as the basis for comparing the results. The high frequency crash locations were analyzed using the composite index method. This statistical procedure utilizes the computed crash frequency, rates and severity to estimate the high frequency crash locations. In addition, the delta-change technique was used to examine the crash trend over a period of time. For the purposes of this report, the crash data from 2007 through 2009 were used to examine the crash trend.

4.1.1 Crash Frequency

The crash frequency is calculated based on the number of crash occurrences at particular crash locations over a period of time. With the high frequency crash locations identified, the crash locations were ranked based on the number of crash occurrences. The higher the crash occurrence at a location, the higher its ranking.

Although the crash frequency computations provided initial overview of the crash experience at various crash locations, this methodology uses only the accident counts from the sites to estimate the high crash locations.

4.1.2 Crash Rate

The crash rate is another method that is frequently used for crash analyses. This technique utilizes the crash occurrences and traffic volume to determine the rate in crashes per

million entering vehicles (C/MEV). The following is the equation of the crash rate described.

$$R = \frac{A * 1{,}000{,}000}{V * 365} \qquad \text{(Equation 1)}$$

Where:

R = Crash Rate for an intersection (crashes per Million Entering Vehicles (MEV);

A = Average number of crashes at the study location per year; and

V = Volume at the study location, Average Daily Traffic (ADT).

Comparing the techniques used to compute and rank the high frequency crash locations, it was found that the crash rate method appears to be more accurate than crash frequency, since it takes the traffic volume of the location into account. Nonetheless, this method has its limitations as the identification of irregular low traffic volume locations may result in many high crash locations. The observation also suggests that the combination of crash rates, crash frequency, and crash costs may reduce the skew and variation of potential high frequency crash locations.

4.1.3 Crash Cost (Crash Severity)

The new and old Traffic Crash Reports (or PD-10 forms) consist of data fields that indicate the injury severity for each person involved in a crash. These codes allow police officers to record their observations regarding the injury conditions of the persons involved in the crash. Nevertheless, in order to properly assess the severity effect, the type of crash information such as fatality, injury, and property damage only (PDO) were utilized as the primary information to determine the severity of a crash. For the purpose of this report, fatality occurrences were converted to injury in order to mitigate the random chance effect. Additionally, the traffic accident costs were computed for each intersection or location to identify the severity indices, with the higher value of severity indices indicate significant levels of incapacitation. Once the severity indices were identified, the crash locations were arranged in descending order based on the severity index with number one being the highest rank.

4.1.4 Crash Composite Index

The composite index is a useful technique to measure the overall risks involved in traffic accidents for particular intersections. The composite index equation utilizes the combination of rankings for crash frequency, rate and severity to provide the overall risks of high frequency crash locations. The following is the equation of the composite index:

$$\text{Composite Index} = 0.25*RF + 0.25*RR + 0.50*RS \qquad \text{(Equation 2)}$$

Where:

RF = Rank of crash frequency;

RR = Rank of crash rate; and

RS = Rank of crash severity.

In order to accurately assess the high frequency crash locations, the composite index equation uses the weighted normalized ranks of crash frequency, rate, and severity to determine the rankings. These factors were weighted based on the values of 0.25, 0.25, and 0.50, respectively. In order to determine the high frequency crash locations, a ranked list was generated for all intersections in each of the three factors aforementioned i.e. crash frequency, crash rate, and crash severity. Then, the ranks for each crash location were combined to generate a composite index list using Equation 2. Once the composite indices were identified, the high crash locations were arranged in ascending order based on the computed indices. As the final step of this composite index procedure, the locations were numerically ranked with number one being the highest rank.

4.1.5 Delta Change

The delta-change method is the change in the number of crashes over time using the slope of a linear regression line. This technique utilizes the computation of the slope to determine the increase or decrease of crashes for a study location. In essence, the delta-change represents the crash trend over a period of time with the positive and negative slope values signifying an increase and decrease in crashes, respectively. Additionally, the results are also an indication whether traffic crashes may increase over time, with the higher slope values indicating that the crashes are increasing at a higher rate. The following is the equation of the delta-change method:

$$\frac{n\sum xy - \sum x\sum y}{n\sum x^2 - (\sum x)^2} \qquad \text{(Equation 3)}$$

Where:

n = Number of years;

x = Year of study; and

y = Number of crashes at study location in year x.

4.2 Identification of High Frequency Crash Intersections

As the first step of determining the high frequency crash locations, the crash occurrences for various intersections from 2007 through 2009 were compiled and arranged to identify the high frequency crash location rankings. On the basis of the results, it can be determined that the intersection of New York Avenue and Bladensburg Road was consistently ranked the highest from 2007 through 2009. Furthermore, the intersection of New York Avenue and North Capitol Street was found to be the second highest among all intersections presented. Overall, the intersection of New York Avenue and Bladensburg road was found to be the most hazardous intersection in the District from 2007 through 2009 on the basis of the number of crash occurrences.

When traffic volume was taken into consideration, the crash rate computations revealed that intersections of 19th Street and Independence Avenue, and 14th Street and U Street were ranked the highest among all intersections presented. Nonetheless, when the three-year crash rates were compiled, the results revealed otherwise. The computations showed that intersections of 14th Street and C Street, and Southern Avenue and Naylor Road emerged to be the first and second most hazardous intersections, respectively among all intersections in the District. These crash rates were calculated based on Equation 1 in chapter 4.1.2.

Similarly, for the crash cost computations of each individual year, the results revealed that the intersections of New York Avenue and Bladensburg Road, and New York Avenue and North Capitol Street were ranked the highest among all intersections presented. As shown in these figures and tables, the crash costs of these two intersections were observed to be relatively higher than the crash cost of other intersections presented. When the three-year crash costs were compiled, the intersection of New York Avenue and Bladensburg Road was again ranked the highest among all intersections presented. Whereas the intersection of Firth Sterling Avenue and Suitland Parkway was found to be the second highest as compared to other intersections in the District.

As stated earlier, in order to examine the true effect of high frequency crash locations, this report utilized the composite index to identify the true characteristics of street intersections or corridors in the District. On the basis of the results, it can be determined that the intersections of Wisconsin Avenue and M Street, and New York Avenue and Bladensburg Road were ranked the highest in the composite index. However, computations of the three-year composite index revealed otherwise. The results showed that the intersections of New York Avenue and Bladensburg Road, and Firth Sterling Avenue and Suitland Parkway emerged to be the top two most hazardous intersections in the District on the basis of the three-year composite index method. For the delta change method, however, the results revealed that Kenilworth Avenue and Benning Road, and Wisconsin Avenue and Q Street were ranked the highest among all intersections presented.

The low composite index determined for the intersection of New York Avenue and Bladensburg Road indicates that the overall risks involved for this intersection is relatively higher as compared with other intersections. For the delta change method, the computed results revealed a positive delta change value for the intersection of Kenilworth Avenue and Benning Road, which indicates an increase in motor vehicle crashes for this location. Furthermore, the delta change value for this intersection, which was relatively higher than other intersections, indicates that the traffic crashes may increase over time at a higher rate.

For the purpose of this report, only the top 20 locations were presented for discussion purposes in each of the subsections. The complete list of the top 100 high frequency crash locations is presented in the Appendix.

4.2.1 Rank by Number of Crash for Each Year

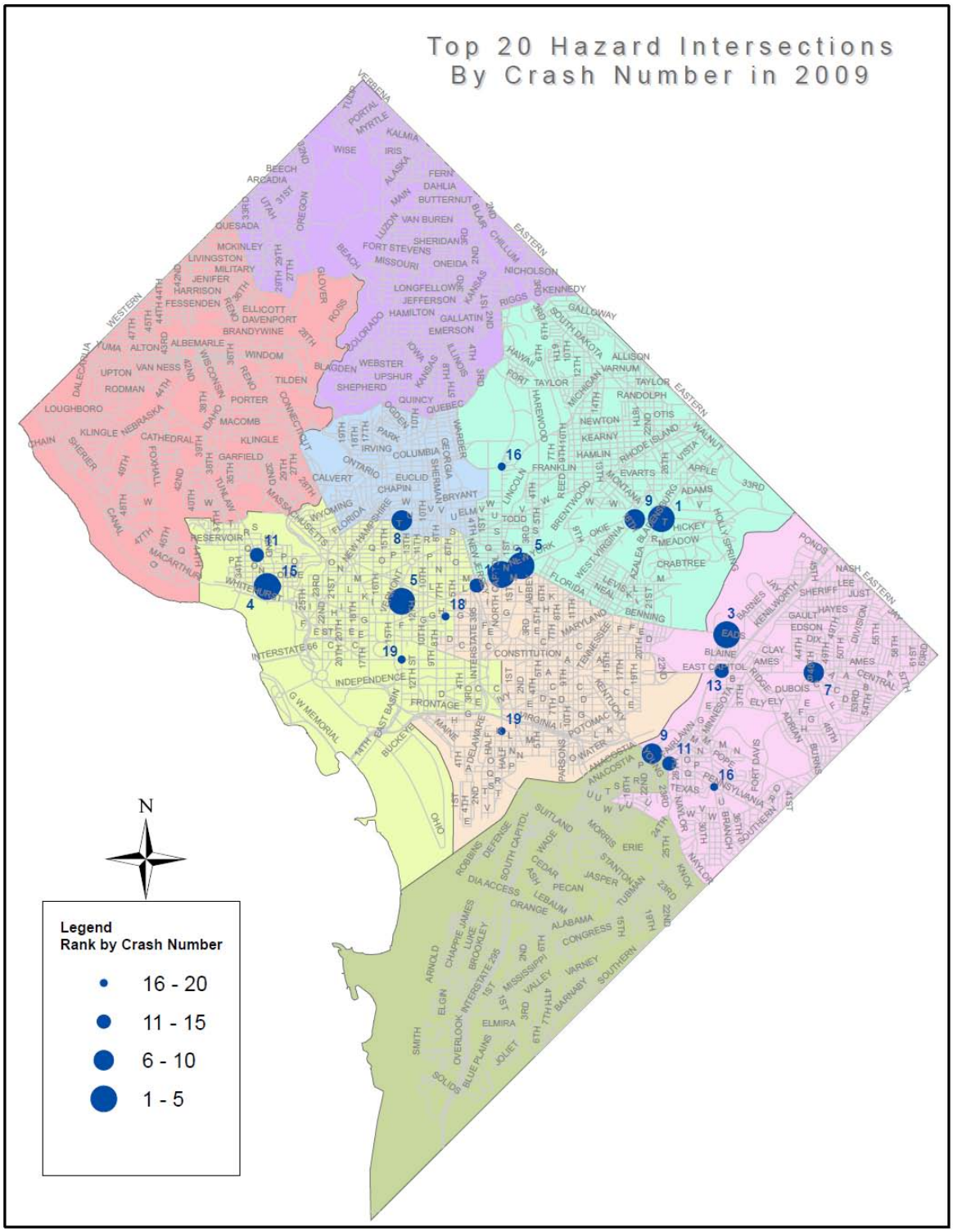

Figure 4.1 Top 20 Hazardous Intersections by Number of Crash Occurrences in 2009

Table 4.1 Top 20 Hazardous Intersections by Number of Crash Occurrences (for Each Year)

INTERSECTION NAME	QUAD	2007		2008		2009	
		Num. Crash	Rank	Num. Crash	Rank	Num. Crash	Rank
NEW YORK AVE AND BLADENSBURG RD	NE	84	1	90	1	80	1
NEW YORK AVE AND NORTH CAPITOL ST	BN	56	2	42	7	57	2
KENILWORTH AVE AND BENNING RD	NE	27	31	49	3	54	3
WISCONSIN AVE AND M ST	NW	50	3	41	8	52	4
14TH ST AND K ST	NW	28	29	48	4	46	5
FLORIDA AVE AND NEW YORK AVE	NE	28	29	41	8	46	5
BENNING RD AND EAST CAPITOL ST	BN	30	24	30	24	44	7
14TH ST AND U ST	NW	30	24	43	6	43	8
MONTANA AVE AND NEW YORK AVE	NE	44	9	36	10	42	9
PENNS. AVE AND ANACOSTIA FRWY	SE	42	10	35	13	42	9
MINNESOTA AVE AND PENNS. AVE	SE	48	4	36	10	38	11
WISCONSIN AVE AND Q ST	NW	12	186	34	14	38	11
NEW JERSEY AVE AND NEW YORK AVE	NW	39	11	44	5	37	13
KENILWORTH AVE AND E. CAPITOL ST	BN	36	15	34	14	37	13
31ST ST AND M ST	NW	31	21	32	19	36	15
BRANCH AVE AND PENNSYLVANIA AVE	SE	33	18	26	28	35	16
MICHIGAN AVE AND NORTH CAPITOL ST	BN	21	44	18	90	35	16
7TH ST AND H ST	NW	46	6	30	24	34	18
14TH ST AND CONSTITUTION AVE	NW	36	15	33	17	32	19
I ST AND S CAPITOL ST	BN	37	13	32	19	32	19

4.2.2 Rank by Number of Crash for Three Years

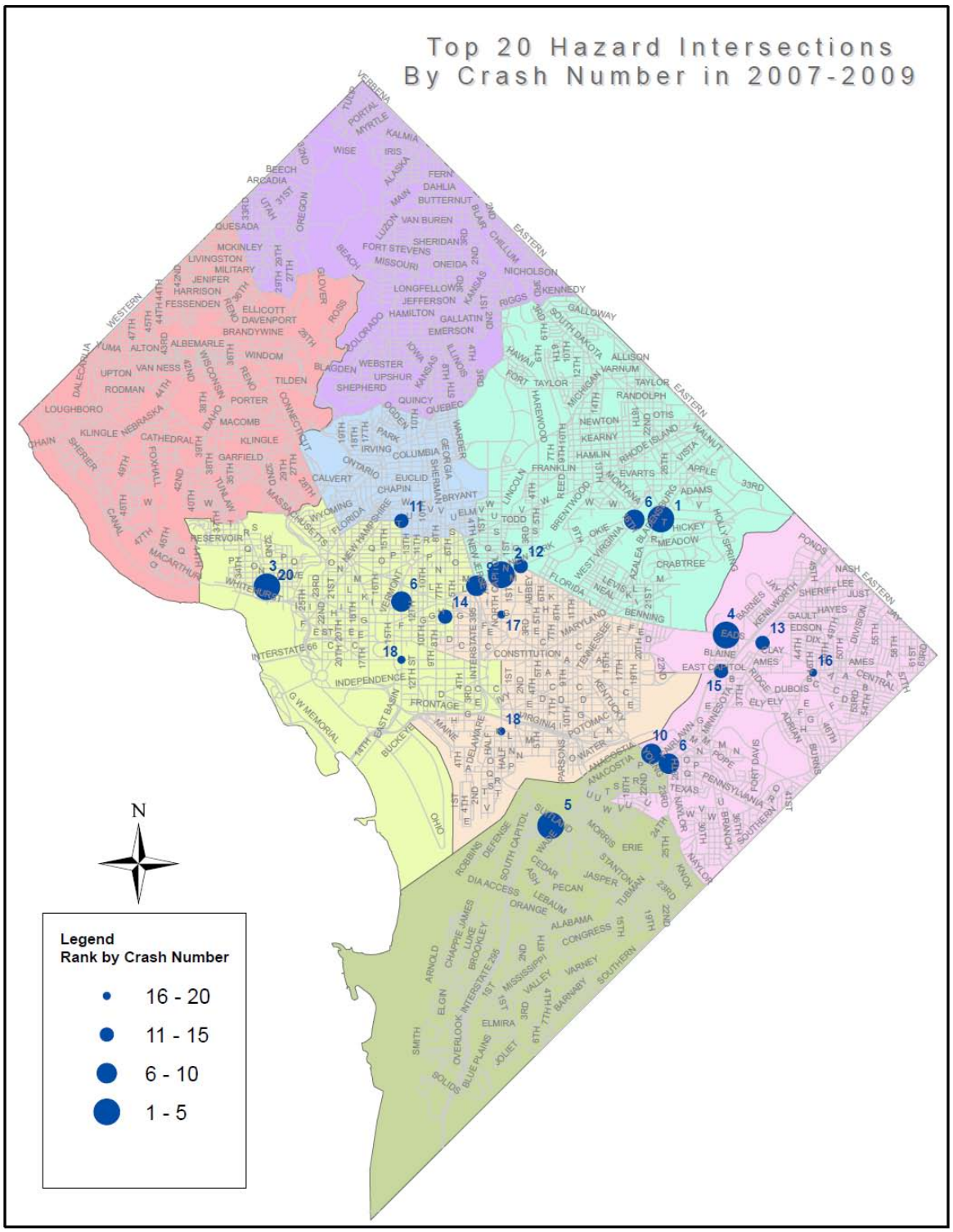

Figure 4.2 Top 20 Hazardous Intersections by Number of Crash Occurrences from 2007 through 2009

Table 4.2 Top 20 Hazardous Intersections by Number of Crash Occurrences for Three Years

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Num. Crash	Rank	Num. Crash	Rank
NEW YORK AVE AND BLADENSBURG RD	NE	258	1	254	1
NEW YORK AVE AND NORTH CAPITOL ST	BN	152	3	155	2
WISCONSIN AVE AND M ST	NW	139	5	143	3
KENILWORTH AVE AND BENNING RD	NE	140	4	130	4
FIRTH STERLING AVE AND SUITLAND PKWY	SE	153	2	127	5
MONTANA AVE AND NEW YORK AVE	NE	121	7	122	6
14TH ST AND K ST	NW	113	13	122	6
MINNESOTA AVE AND PENNSYLVANIA AVE	SE	109	15	122	6
NEW JERSEY AVE AND NEW YORK AVE	NW	135	6	120	9
PENNSYLVANIA AVE AND ANACOSTIA FRWY	SE	99	19	119	10
14TH ST AND U ST	NW	117	9	116	11
FLORIDA AVE AND NEW YORK AVE	NE	119	8	115	12
MINNESOTA AVE AND BENNING RD	NE	114	10	111	13
7TH ST AND H ST	NW	110	14	110	14
KENILWORTH AVE AND EAST CAPITOL ST	BN	73	36	107	15
BENNING RD AND EAST CAPITOL ST	BN	89	22	104	16
H ST AND NORTH CAPITOL ST	BN	114	10	103	17
14TH ST AND CONSTITUTION AVE	NW	114	10	101	18
I ST AND S CAPITOL ST	BN	105	18	101	18
STANTON RD AND SUITLAND PKWY	SE	109	15	99	20

4.2.3 Rank by Crash Rate for Each Year

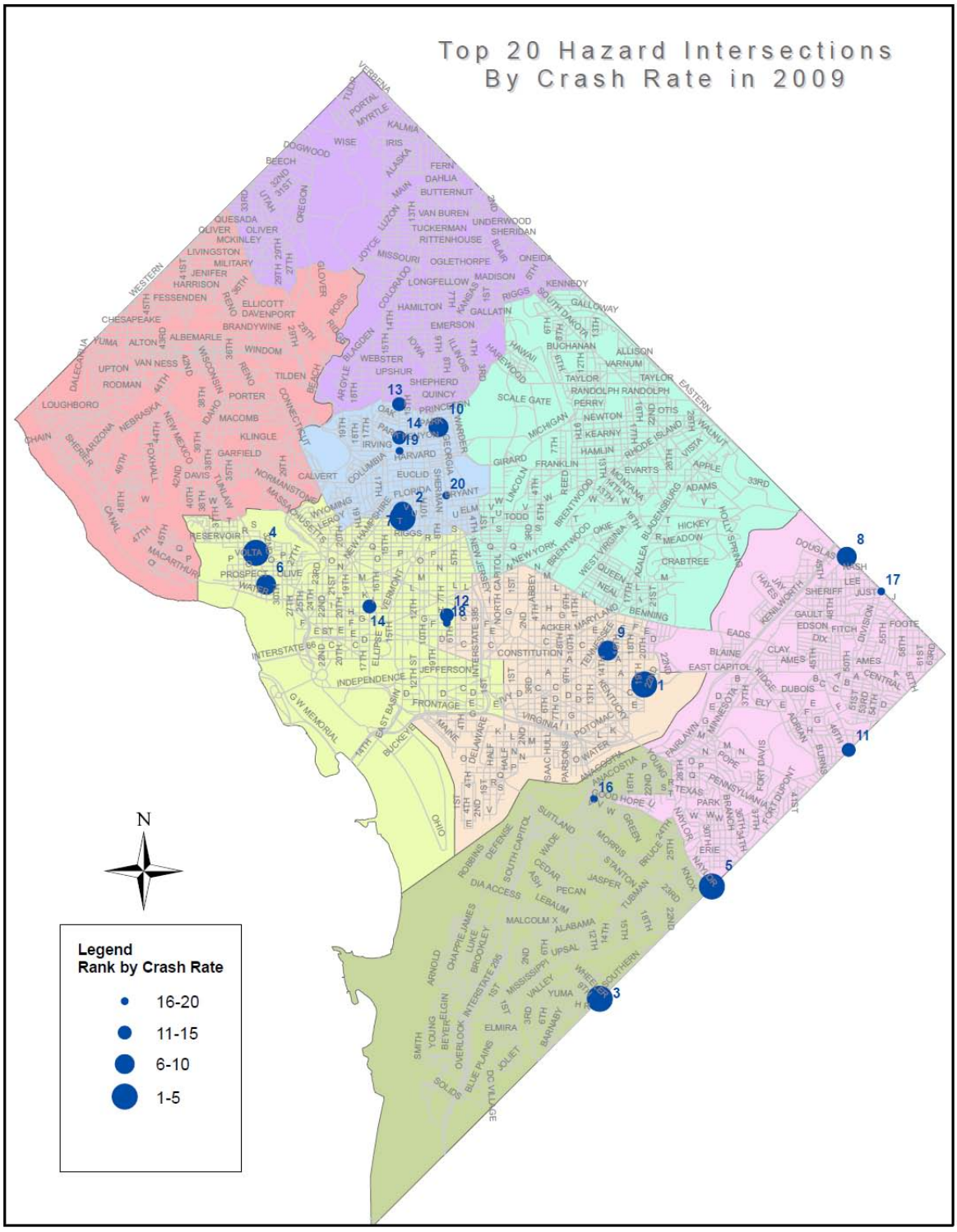

Figure 4.3 Top 20 Hazardous Intersections by Crash Rates in 2009

Table 4.3 Top 20 Hazardous Intersections by Crash Rates for Each Year

INTERSECTION NAME	QUAD	2007		2008		2009	
		Crash Rate	Rank	Crash Rate	Rank	Crash Rate	Rank
19TH ST AND INDEPENDENCE AVE	SE	2.57	15	2.28	24	4.28	1
14TH ST AND U ST	NW	2.82	13	4.05	2	4.05	2
SOUTHERN AVE AND WHEELER RD	BN	2.71	14	2.71	12	3.91	3
WISCONSIN AVE AND Q ST	NW	1.23	97	3.48	4	3.89	4
SOUTHERN AVE AND NAYLOR RD	BN	4.11	4	3.56	3	3.84	5
WISCONSIN AVE AND M ST	NW	3.67	6	3.01	10	3.82	6
14TH ST AND V ST	NW	3.22	10	0.81	182	3.76	7
EASTERN AVE AND ADDISON RD	BN	2.38	24	1.91	46	3.65	8
14TH ST AND C ST	NE	4.76	1	4.47	1	3.57	9
GEORGIA AVE AND PARK RD	NW	2.46	20	2.20	27	3.50	10
SOUTHERN AVE AND BENNING RD	BN	4.25	3	2.12	32	3.40	11
7TH ST AND H ST	NW	4.53	2	2.95	11	3.34	12
14TH ST AND SPRING RD	NW	1.84	44	3.27	6	3.27	13
17TH ST AND I ST	NW	1.19	103	2.15	30	3.22	14
14TH ST AND MONROE ST	NW	0.85	166	2.21	26	3.22	14
MARTIN LUTHER KING AVE AND GOOD HOPE RD	SE	3.56	7	2.00	38	3.12	16
DIVISION AVE AND SHERIFF RD	BN	2.10	32	1.97	42	3.02	17
7TH ST AND G ST	NW	2.29	25	2.11	33	3.00	18
14TH ST AND IRVING ST	NW	1.13	108	1.61	64	2.83	19
GEORGIA AVE AND BARRY PL	NW	1.35	81	3.10	8	2.83	20

4.2.4 Rank by Crash Rate for Three Years

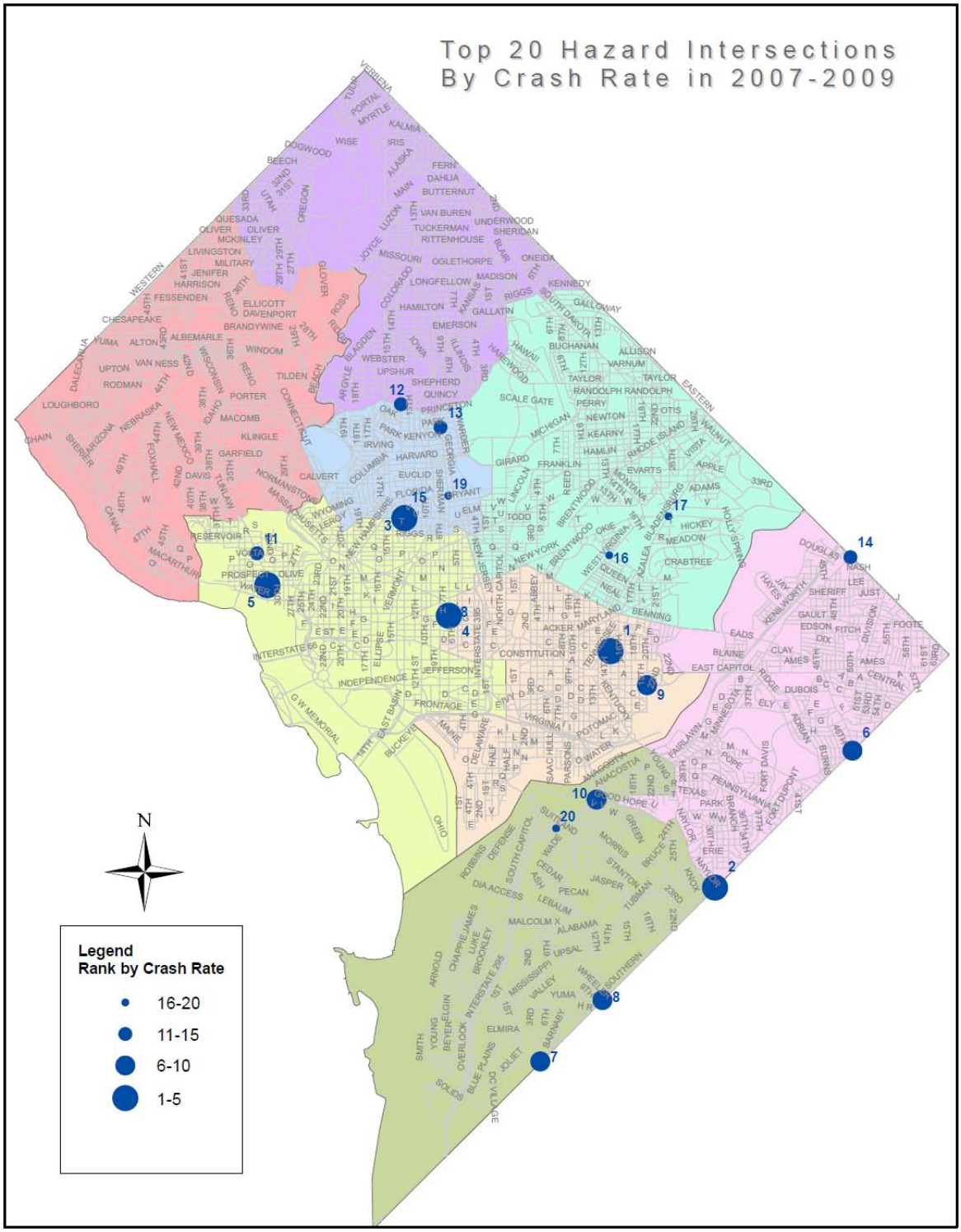

Figure 4.4 Top 20 Hazardous Intersections by Crash Rates from 2007 through 2009

Table 4.4 Top 20 Hazardous Intersections by Crash Rates for Three Years

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Crash Rate	Rank	Crash Rate	Rank
14TH ST AND C ST	NE	4.37	1	4.27	1
SOUTHERN AVE AND NAYLOR RD	BN	3.38	5	3.84	2
14TH ST AND U ST	NW	3.67	2	3.64	3
7TH ST AND H ST	NW	3.61	3	3.61	4
WISCONSIN AVE AND M ST	NW	3.40	4	3.50	5
SOUTHERN AVE AND BENNING RD	BN	2.97	8	3.26	6
SOUTHERN AVE AND S CAPITOL ST	BN	3.34	6	3.12	7
SOUTHERN AVE AND WHEELER RD	BN	3.06	7	3.11	8
19TH ST AND INDEPENDENCE AVE	SE	2.57	14	3.04	9
MARTIN LUTHER KING AVE AND GOOD HOPE RD	SE	2.30	20	2.90	10
WISCONSIN AVE AND Q ST	NW	2.05	32	2.87	11
14TH ST AND SPRING RD	NW	2.86	10	2.79	12
GEORGIA AVE AND PARK RD	NW	2.12	26	2.72	13
EASTERN AVE AND ADDISON RD	BN	2.12	25	2.65	14
14TH ST AND V ST	NW	2.06	31	2.60	15
WEST VIRGINIA AVE AND MOUNT OLIVET RD	NE	2.70	12	2.59	16
NEW YORK AVE AND BLADENSBURG RD	NE	2.54	16	2.51	17
7TH ST AND G ST	NW	2.00	36	2.47	18
GEORGIA AVE AND BARRY PL	NW	2.56	15	2.42	19
FIRTH STERLING AVE AND SUITLAND PKWY	SE	2.90	9	2.41	20

4.2.5 Rank by Crash Cost for Each Year

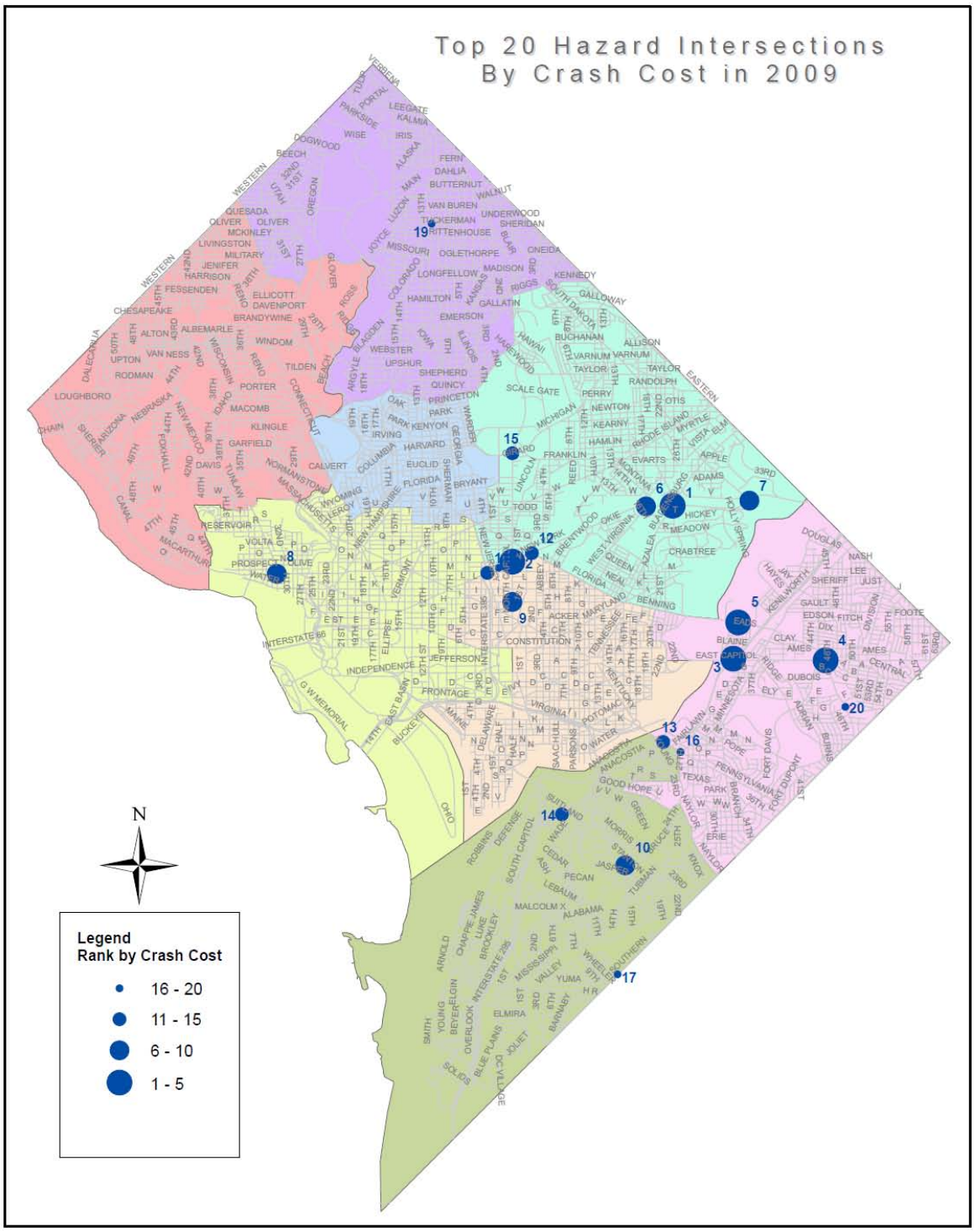

Figure 4.5 Top 20 Hazardous Intersections by Crash Cost in 2009

Table 4.5 Top 20 Hazardous Intersections by Crash Cost for Each Year

INTERSECTION NAME	QUAD	2007		2008		2009	
		Crash Severity	Rank	Crash Severity	Rank	Crash Severity	Rank
NEW YORK AVE AND BLADENSBURG RD	NE	993	1	1197	1	903	1
NEW YORK AVE AND NORTH CAPITOL ST	BN	738	2	474	11	738	2
KENILWORTH AVE AND EAST CAPITOL ST	BN	605	5	681	4	704	3
BENNING RD AND EAST CAPITOL ST	BN	315	46	300	44	672	4
KENILWORTH AVE AND BENNING RD	NE	423	23	660	5	656	5
MONTANA AVE AND NEW YORK AVE	NE	551	9	497	9	612	6
NEW YORK AVE AND SOUTH DAKOTA AVE	NE	498	13	210	94	597	7
WISCONSIN AVE AND M ST	NW	450	18	392	23	594	8
H ST AND NORTH CAPITOL ST	BN	570	8	384	25	593	9
STANTON RD AND SUITLAND PKWY	SE	422	24	429	15	558	10
NEW JERSEY AVE AND NEW YORK AVE	NW	503	12	686	3	557	11
FLORIDA AVE AND NEW YORK AVE	NE	330	42	618	6	540	12
PENNSYLVANIA AVE AND ANACOSTIA FRWY	SE	635	4	428	16	533	13
FIRTH STERLING AVE AND SUITLAND PKWY	SE	662	3	936	2	530	14
MICHIGAN AVE AND NORTH CAPITOL ST	BN	240	77	203	104	482	15
MINNESOTA AVE AND PENNSYLVANIA AVE	SE	594	6	345	32	474	16
13TH ST AND SOUTHERN AVE	BN	272	57	272	59	459	17
1ST ST AND NEW YORK AVE	NW	467	16	315	38	428	18
GEORGIA AVE AND PINEY BRANCH RD	NW	120	213	150	174	426	19
BENNING RD AND G ST	SE	248	71	120	232	425	20

4.2.6 Rank by Crash Cost for Three Years

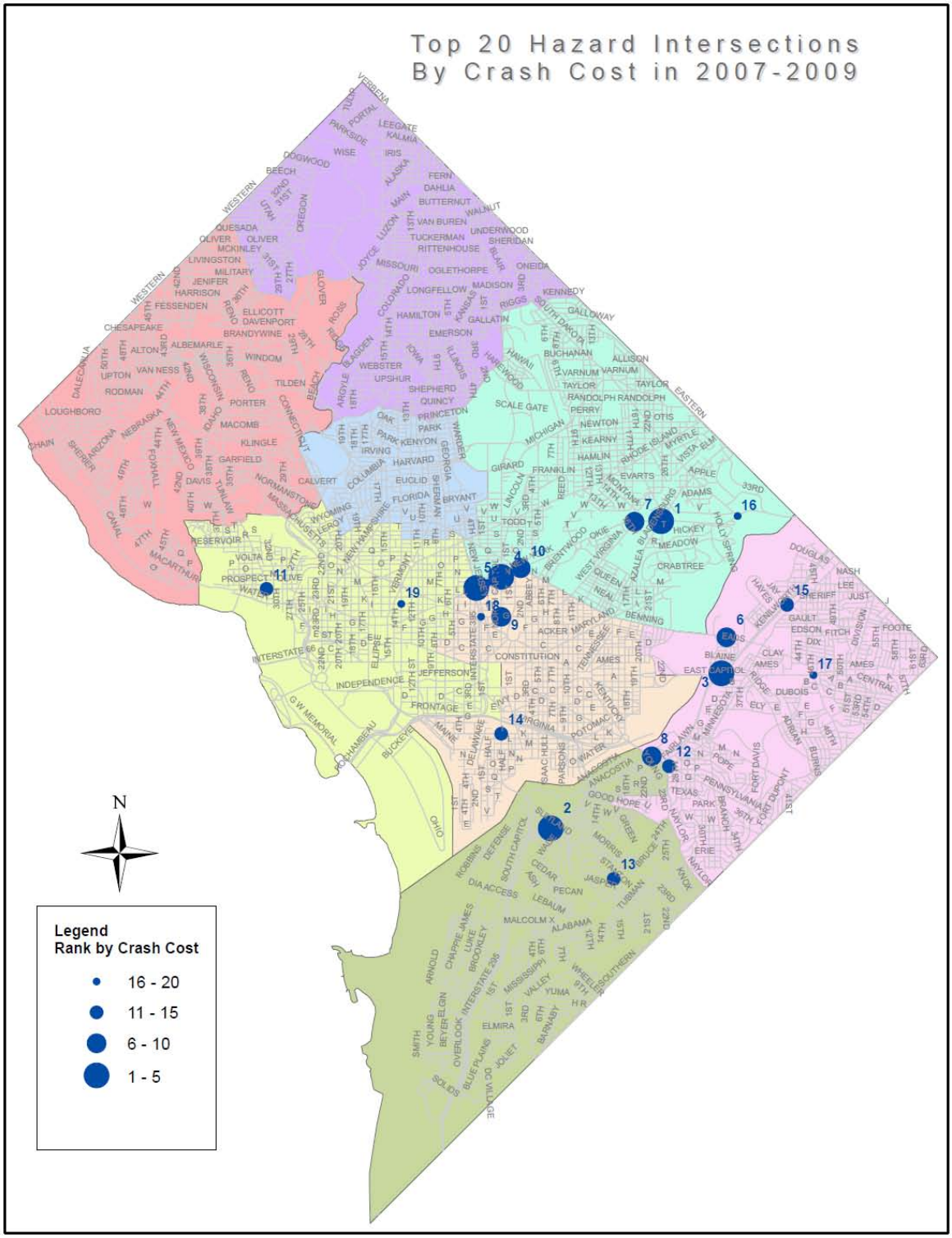

Figure 4.6 Top 20 Hazardous Intersections by Crash Cost from 2007 through 2009

Table 4.6 Top 20 Hazardous Intersections by Crash Cost for Three Years

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Crash Severity	Rank	Crash Severity	Rank
NEW YORK AVE AND BLADENSBURG RD	NE	3815	1	3094	1
FIRTH STERLING AVE AND SUITLAND PKWY	SE	2611	2	2128	2
KENILWORTH AVE AND EAST CAPITOL ST	BN	1331	12	1990	3
NEW YORK AVE AND NORTH CAPITOL ST	BN	1827	5	1951	4
NEW JERSEY AVE AND NEW YORK AVE	NW	1841	4	1745	5
KENILWORTH AVE AND BENNING RD	NE	1916	3	1739	6
MONTANA AVE AND NEW YORK AVE	NE	1583	7	1660	7
PENNSYLVANIA AVE AND ANACOSTIA FRWY	SE	1386	10	1595	8
H ST AND NORTH CAPITOL ST	BN	1481	8	1547	9
FLORIDA AVE AND NEW YORK AVE	NE	1596	6	1488	10
WISCONSIN AVE AND M ST	NW	1239	19	1436	11
MINNESOTA AVE AND PENNSYLVANIA AVE	SE	1391	9	1413	12
STANTON RD AND SUITLAND PKWY	SE	1383	11	1409	13
I ST AND S CAPITOL ST	BN	1308	14	1376	14
KENILWORTH AVE AND NANNIE HELEN BURROUGHS AVE	NE	1289	15	1341	15
NEW YORK AVE AND SOUTH DAKOTA AVE	NE	1238	20	1306	16
BENNING RD AND EAST CAPITOL ST	BN	975	35	1287	17
2ND ST AND H ST	NW	1322	13	1286	18
14TH ST AND K ST	NW	1257	18	1263	19
1ST ST AND NEW YORK AVE	NW	1074	30	1209	20

4.2.7 Rank by Crash Composite Index for Each Year

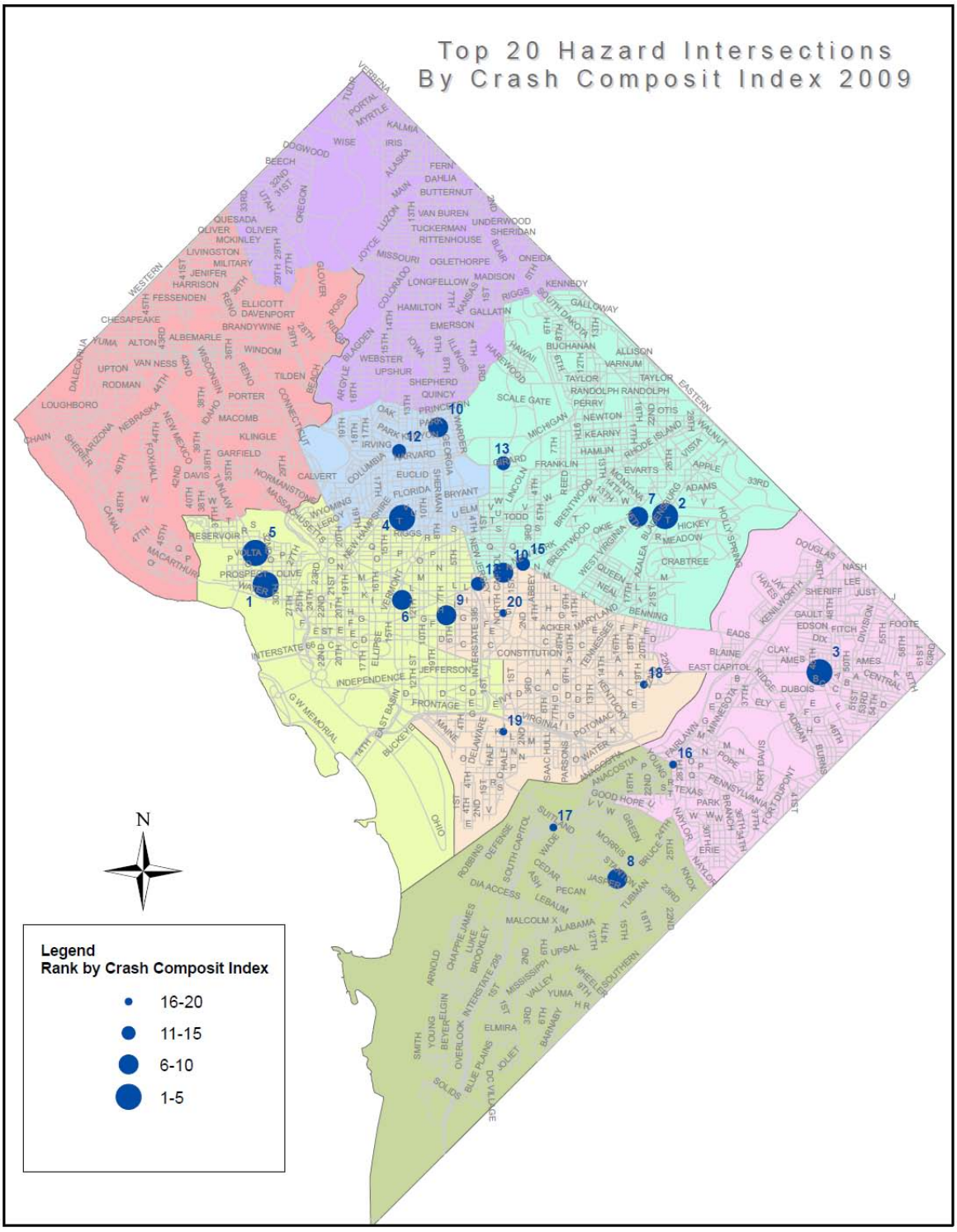

Figure 4.7 Top 20 Hazardous Intersections by Composite Indices in 2009

Table 4.7 Top 20 Hazardous Intersections by Composite Indices for Each Year

INTERSECTION NAME	QUAD	2007		2008		2009	
		Comp. Index	Rank	Comp. Index	Rank	Comp. Index	Rank
WISCONSIN AVE AND M ST	NW	11.25	5	16	5	7	1
NEW YORK AVE AND BLADENSBURG RD	NE	5.25	1	4	2	8.25	2
BENNING RD AND EAST CAPITOL ST	BN	45.75	25	46	25	12.5	3
14TH ST AND U ST	NW	33.25	19	14	4	15.5	4
WISCONSIN AVE AND Q ST	NW	177.25	189	25	9	20.25	5
14TH ST AND K ST	NW	46.5	26	8.25	3	20.75	6
MONTANA AVE AND NEW YORK AVE	NE	20.25	12	27.5	13	21	7
STANTON RD AND SUITLAND PKWY	SE	24	14	23.25	8	22	8
7TH ST AND H ST	NW	11.5	6	32.25	19	22.5	9
NEW YORK AVE AND NORTH CAPITOL ST	BN	21	13	43.75	24	24.5	10
GEORGIA AVE AND PARK RD	NW	83.75	66	116	109	24.5	10
14TH ST AND IRVING ST	NW	180	193	85.25	66	26.5	12
NEW JERSEY AVE AND NEW YORK AVE	NW	24.25	15	16.25	6	28.75	13
MICHIGAN AVE AND NORTH CAPITOL ST	BN	84.25	68	119.75	116	28.75	13
FLORIDA AVE AND NEW YORK AVE	NE	67.5	48	28.75	14	29	15
MINNESOTA AVE AND PENNSYLVANIA AVE	SE	14.25	7	38.75	23	30.5	16
FIRTH STERLING AVE AND SUITLAND PKWY	SE	7.5	2	3.75	1	31.5	17
19TH ST AND INDEPENDENCE AVE	SE	81.5	62	122.5	121	32	18
I ST AND S CAPITOL ST	BN	19.75	11	30.75	17	33.75	19
H ST AND NORTH CAPITOL ST	BN	8.5	4	27	11	34.5	20

4.2.8 Rank by Crash Composite Index for Three Years

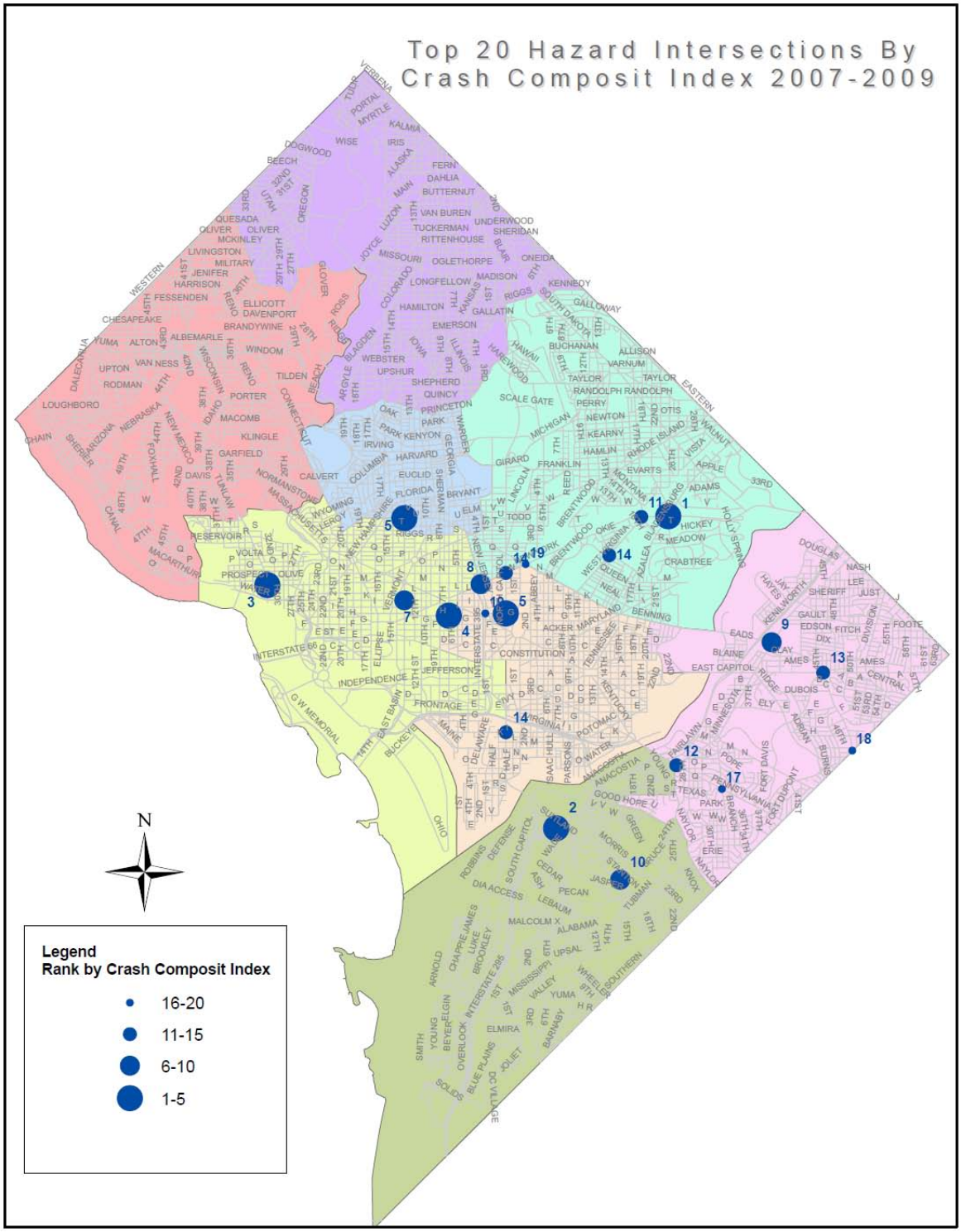

Figure 4.8 Top 20 Hazardous Intersections by Composite Indices from 2007 through 2009

Table 4.8 Top 20 Hazardous Intersections by Composite Indices for Three Years

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Comp. Index	Rank	Comp. Index	Rank
NEW YORK AVE AND BLADENSBURG RD	NE	4.75	2	5	1
FIRTH STERLING AVE AND SUITLAND PKWY	SE	3.75	1	7.25	2
WISCONSIN AVE AND M ST	NW	11.75	4	7.5	3
7TH ST AND H ST	NW	16.75	9	16	4
14TH ST AND U ST	NW	13.75	5	16.5	5
H ST AND NORTH CAPITOL ST	BN	11.25	3	16.5	5
14TH ST AND K ST	NW	20.75	10	18.5	7
NEW JERSEY AVE AND NEW YORK AVE	NW	14.75	6	19.75	8
MINNESOTA AVE AND BENNING RD	NE	14.75	6	20	9
STANTON RD AND SUITLAND PKWY	SE	15	8	20.75	10
MONTANA AVE AND NEW YORK AVE	NE	21.75	11	21.25	11
MINNESOTA AVE AND PENNSYLVANIA AVE	SE	28.25	16	22.75	12
BENNING RD AND EAST CAPITOL ST	BN	40.5	26	25	13
NEW YORK AVE AND NORTH CAPITOL ST	BN	28.75	17	26.25	14
I ST AND S CAPITOL ST	BN	26	15	26.25	14
WEST VIRGINIA AVE AND MOUNT OLIVET RD	NE	25.5	13	26.25	14
BRANCH AVE AND PENNSYLVANIA AVE	SE	23.5	12	27.75	17
SOUTHERN AVE AND BENNING RD	BN	32.75	19	29.5	18
FLORIDA AVE AND NEW YORK AVE	NE	30.25	18	33.5	19
2ND ST AND H ST	NW	25.5	13	33.5	19

4.2.9 Rank by Crash Trend with Delta Change

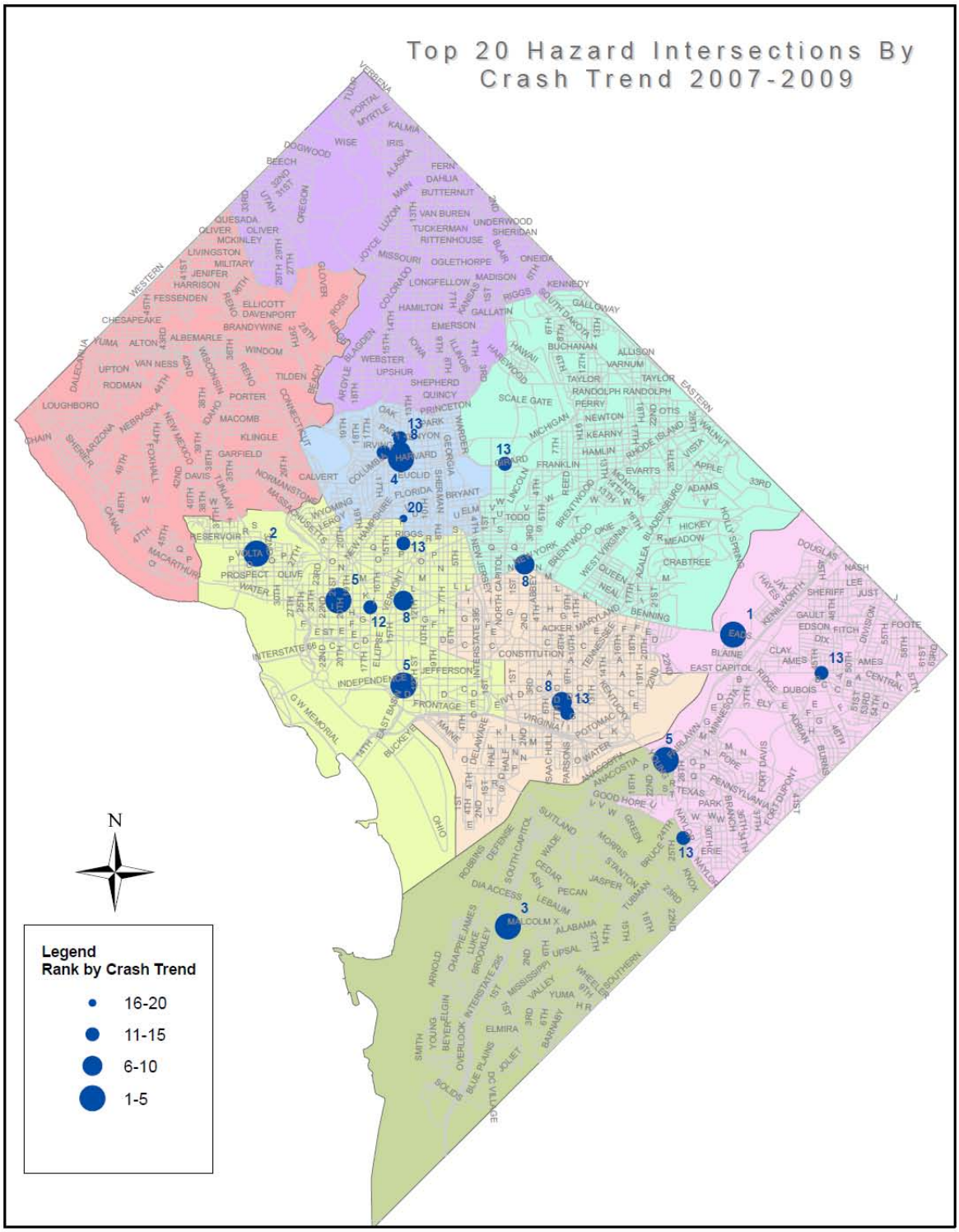

Figure 4.9 Top 20 Hazardous Intersections by Delta Change Values from 2007 to 2009

Table 4.9 Top 20 Hazardous Intersections by Delta Change Values for Each Year

INTERSECTION NAME	QUAD	2007 Crash	2008 Crash	2009 Crash	Delta	Rank
KENILWORTH AVE AND BENNING RD	NE	27	49	54	13.5	1
WISCONSIN AVE AND Q ST	NW	12	34	38	13	2
PORTLAND ST AND S CAPITOL ST	BN	0	16	22	11	3
14TH ST AND COLUMBIA RD	NW	6	20	26	10	4
PENNSYLVANIA AVE AND PROUT ST	SE	11	11	30	9.5	5
21ST ST AND K ST	NW	8	14	27	9.5	5
14TH ST AND INDEPENDENCE AVE	SW	0	14	19	9.5	5
14TH ST AND K ST	NW	28	48	46	9	8
FLORIDA AVE AND NEW YORK AVE	NE	28	41	46	9	8
14TH ST AND IRVING ST	NW	12	17	30	9	8
7TH ST AND PENNSYLVANIA AVE	SE	0	6	18	9	8
17TH ST AND I ST	NW	10	18	27	8.5	12
BENNING RD AND EAST CAPITOL ST	BN	30	30	44	7	13
MICHIGAN AVE AND NORTH CAPITOL ST	BN	21	18	35	7	13
16TH ST AND IRVING ST	NW	9	16	23	7	13
14TH ST AND MONROE ST	NW	5	13	19	7	13
14TH ST AND R ST	NW	3	7	17	7	13
8TH ST AND E ST	SE	0	8	14	7	13
GOOD HOPE RD AND NAYLOR RD	SE	0	3	14	7	13
14TH ST AND U ST	NW	30	43	43	6.5	20

4.3 High Frequency Crash Intersection by Collision Type

In order to determine the crash pattern for each of the identified top 20 high frequency crash locations, the collision locations were further divided into specific groups. For the purpose of this report, these high frequency crash locations were categorized by collision type. As shown in Table 4.10, rear end collision was the leading crash type for most of the high frequency crash locations, whereas side swiped and right-angle collisions were the second and third most frequently reported motor vehicle crashes for the computed top 20 high frequency crash locations.

Table 4.10 Top 20 Hazardous Intersections by Collision Type

Type of Collision	Backing	Fixed Object	Head On	Left Turn	Non-Collision	Other	Parked Vehicle	Ran Off Roadway	Rear End	Right Angle	Right Turn	Side Swiped	Straight	Override	Underride	Unknown	Total Crash
NEW YORK AVE AND BLADENSBURG RD,NE	8	13	2	18	0	5	1	3	99	22	12	68	1	0	0	2	254
NEW YORK AVE AND NORTH CAPITOL ST,BN	4	6	1	16	0	4	5	2	29	22	8	54	10	0	0	2	163
MINNESOTA AVE AND PENNSYLVANIA AVE,SE	3	5	0	18	0	11	4	0	31	35	6	38	1	0	0	4	156
WISCONSIN AVE AND M ST,NW	5	0	0	17	0	11	7	0	24	4	27	43	3	0	0	2	143
KENILWORTH AVE AND BENNING RD,NE	0	10	4	1	0	3	0	5	67	3	1	33	1	0	0	2	130
FIRTH STERLING AVE AND SUITLAND PKWY,SE	2	9	7	40	0	4	0	4	38	6	3	11	1	0	0	2	127
14TH ST AND K ST,NW	4	0	0	12	0	7	4	1	24	14	9	42	5	0	0	0	122
MONTANA AVE AND NEW YORK AVE,NE	2	4	1	7	0	8	1	1	43	12	6	35	0	0	0	2	122
NEW JERSEY AVE AND NEW YORK AVE,NW	1	1	1	10	0	8	0	0	26	44	5	18	5	0	0	1	120
PENNSYLVANIA AVE AND ANACOSTIA FRWY,SE	0	16	3	2	2	0	1	4	55	8	0	27	0	0	0	1	119
14TH ST AND U ST,NW	15	0	2	13	1	4	12	0	18	9	3	38	1	0	0	0	116
FLORIDA AVE AND NEW YORK AVE,NE	4	3	0	6	0	6	1	0	53	10	6	21	2	1	0	2	115
MINNESOTA AVE AND BENNING RD,NE	5	6	2	12	0	3	1	0	30	10	4	26	8	0	0	4	111
7TH ST AND H ST,NW	8	1	1	5	0	9	8	0	14	11	5	34	13	0	0	1	110
KENILWORTH AVE AND EAST CAPITOL ST,BN	1	15	1	1	1	2	0	8	49	0	0	27	1	0	0	1	107
BENNING RD AND EAST CAPITOL ST,BN	8	3	2	8	1	2	1	0	28	7	6	30	7	0	0	1	104
H ST AND NORTH CAPITOL ST,BN	1	1	1	17	0	2	1	0	28	15	6	26	4	0	0	1	103
I ST AND S CAPITOL ST,BN	5	3	1	10	0	5	1	0	23	26	2	22	0	0	0	3	101
14TH ST AND CONSTITUTION AVE,NW	1	1	3	5	1	5	3	1	26	24	7	23	0	0	0	1	101
STANTON RD AND SUITLAND PKWY,SE	0	3	0	0	1	2	1	8	54	4	3	18	2	0	0	3	99

4.4 Identification of High Frequency Crash Corridors

4.4.1 Summary of Collisions on Corridors

On the basis of the results presented in Table 4.11, it can be observed that New York Avenue, Pennsylvania Avenue, and Georgia Avenue were three frequently reported corridors for motor vehicle crashes in the District.

Table 4.11 High Frequency Crash Corridors for Each Year

Corridor	2007			2008			2009		
	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries	No. of Collisions	Fatalities	Injuries
NEW YORK AVE	610	2	293	620	0	311	654	3	325
PENNSYLVANIA AVE	631	5	287	613	1	259	635	1	241
GEORGIA AVE	513	0	253	494	0	216	578	1	250
NORTH CAPITOL ST	491	1	250	495	1	230	534	0	256
CONNECTICUT AVE	423	1	140	461	2	150	459	1	163
SIXTEENTH ST, NW	390	0	156	461	0	174	448	2	174
WISCONSIN AVE	405	1	135	387	0	109	435	1	158
BENNING RD	368	1	197	329	0	151	424	0	201
FLORIDA AVE	349	0	163	406	1	179	422	0	185
RHODE ISLAND AVE	346	0	165	429	0	196	377	1	165
SOUTHERN AVE	349	1	235	320	3	218	344	3	228
BLADENSBURG RD	242	0	105	238	1	105	248	0	83
CONSTITUTION AVE	246	1	107	224	0	106	213	1	98
NEW JERSEY AVE	148	0	74	161	0	87	160	1	92

Figure 4.10 Map of Corridors with High Frequency Crash

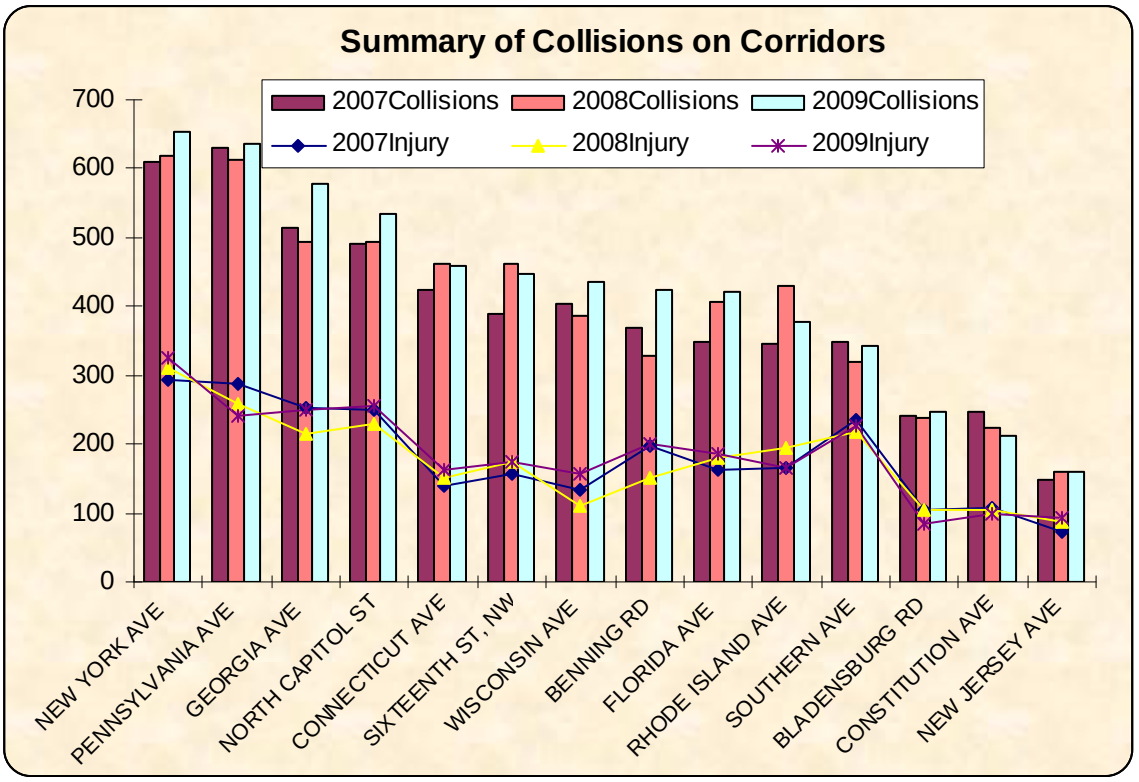

Figure 4.11 High Frequency Traffic Corridors for Each Year

Table 4.12 Summary of High Frequency Crash Corridors (2007~2009)

Corridor	Length (miles)	No. of Intersection	No. of Crash	Average Crashes per Mile	Average Crashes per Intersection
NEW YORK AVE	5.08	46	1884	370.87	40.96
PENNSYLVANIA AVE	5.48	89	1879	342.88	21.11
GEORGIA AVE	4.76	65	1585	332.98	24.38
NORTH CAPITOL ST	3.85	73	1520	394.81	20.82
CONNECTICUT AVE	5.01	73	1343	268.06	18.40
SIXTEENTH ST, NW	6.39	89	1299	203.29	14.60
WISCONSIN AVE	4.87	65	1227	251.95	18.88
FLORIDA AVE	5.46	80	1177	215.57	14.71
RHODE ISLAND AVE	4.56	49	1152	252.63	23.51
BENNING RD	3.39	45	1121	330.68	24.91
SOUTHERN AVE	5.4	122	1013	187.59	8.30
BLADENSBURG RD	2.65	45	728	274.72	16.18
CONSTITUTION AVE	3.9	52	683	175.13	13.13
NEW JERSEY AVE	2.79	38	469	168.10	12.34

4.4.2 High Frequency Crash Corridors by Number of Crashes per Mile

In this report, it is of interest to determine the number of crashes per mile. Based on the results in Table 4.13, North Capitol Street, New York Avenue, and Benning Road were the three highest ranked corridors from 2007 through 2009 on the basis of number of crashes per mile.

Table 4.13 High Frequency Crash Corridors by Number of Crash Occurrences per Mile

Corridor	2007	2008	2009
NORTH CAPITOL ST	127.53	128.57	138.70
NEW YORK AVE	120.08	122.05	128.74
BENNING RD	108.55	97.05	125.07
GEORGIA AVE	107.77	103.78	121.43
PENNSYLVANIA AVE	115.15	111.86	115.88
BLADENSBURG RD	91.32	89.81	93.58
CONNECTICUT AVE	84.43	92.02	91.62
WISCONSIN AVE	83.16	79.47	89.32
RHODE ISLAND AVE	75.88	94.08	82.68
FLORIDA AVE	63.92	74.36	77.29
SIXTEENTH ST, NW	61.03	72.14	70.11
SOUTHERN AVE	64.63	59.26	63.70
NEW JERSEY AVE	53.05	57.71	57.35
CONSTITUTION AVE	63.08	57.44	54.62

4.4.3 Number of Crashes per Intersecting Intersection on Corridors

As shown in Table 4.14 below, it can be observed that New York Avenue, Benning Road, and Georgia Avenue were the three higher ranked corridors on the basis of crashes per intersecting intersection on corridors.

Table 4.14 Number of Crashes per Intersecting Intersection on Corridors

Corridor	2007	2008	2009
NEW YORK AVE	13.26	13.48	14.22
BENNING RD	8.18	7.31	9.42
GEORGIA AVE	7.89	7.60	8.89
RHODE ISLAND AVE	7.06	8.76	7.69
NORTH CAPITOL ST	6.73	6.78	7.32
PENNSYLVANIA AVE	7.09	6.89	7.13
WISCONSIN AVE	6.23	5.95	6.69
CONNECTICUT AVE	5.79	6.32	6.29
BLADENSBURG RD	5.38	5.29	5.51
FLORIDA AVE	4.36	5.08	5.28
SIXTEENTH ST, NW	4.38	5.18	5.03
NEW JERSEY AVE	3.89	4.24	4.21
CONSTITUTION AVE	4.73	4.31	4.10
SOUTHERN AVE	2.86	2.62	2.82

CHAPTER 5 EXPOSURE

5.1 Fatality Rate per 100 Million Vehicle Miles Traveled (VMT)

For the exposure data, the fatality rate per 100 million vehicle miles traveled (VMT) information was extracted from the National Highway Traffic Safety Administration (NHTSA). This was used to examine and compare the motor vehicle crash fatality rate of Washington, DC to that of the nation. On the basis of the results shown in Table 5.1 and Figure 5.1, it can be determined that the fatalities per 100 million VMT of the District from 2004 to 2009 were substantially lower than the national level rate except for the year 2007, where an increase was observed. Overall, the fatalities per 100 million VMT for Washington, DC is relatively lower than the national level.

Table 5.1 Fatality Rate from 2004 through 2009

Year		Fatalities	Total VMT (Millions)	Fatalities Per 100 Million VMT	Total Population	Fatalities Per 100,000 Population
2004	Dist of Columbia	45	3,742	1.20	579,521	7.77
	US	42,836	2,964,788	1.44	292,892,127	14.63
2005	Dist of Columbia	49	3,713	1.32	582,049	8.42
	US	43,510	2,989,430	1.46	295,753,121	14.71
2006	Dist of Columbia	41	3,623	1.13	583,978	7.02
	US	42,708	3,014,371	1.42	298,593,212	14.30
2007	Dist of Columbia	54	3,609	1.50	586,409	9.21
	US	41,259	3,032,399	1.36	301,579,895	13.68
2008	Dist of Columbia	39	3,611	1.08	590,074	6.61
	US	37,423	2,973,509	1.26	304,374,846	12.30
2009	Dist of Columbia	33	3,607	0.91	599,657	5.50
	US	33,808	2,979,321	1.13	307,006,550	11.01

All of the above figures were obtained from the NHTSA except for the fatalities data of District of Columbia.

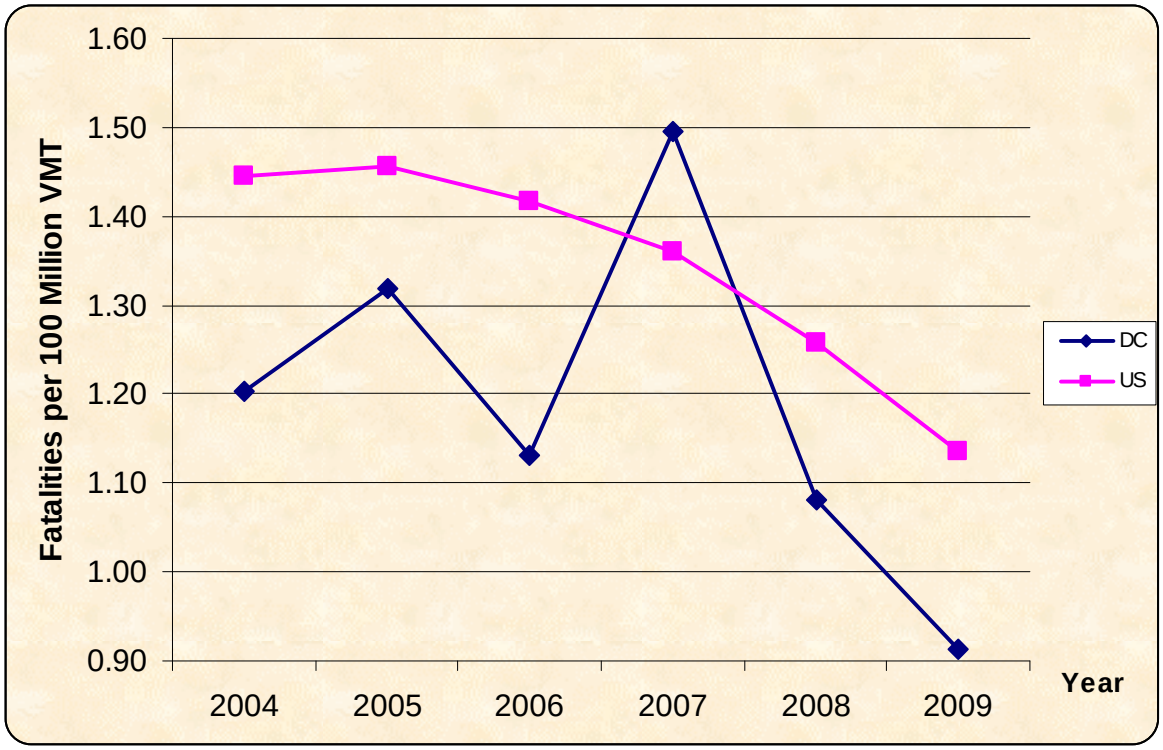

Figure 5.1 Fatality Rate per 100 Million VMT from 2004 through 2009

5.2 Injury Rate per 100 Million Vehicle Miles Traveled (VMT)

Similarly, the injury rate per 100 million vehicle miles traveled (VMT) information from 2004 through 2009 were extracted from the National Highway Traffic Safety Administration (NHTSA) to examine and compare the injury rate of motor vehicle crashes in Washington, DC to the national level. On the basis of the results presented in Table 5.2 and Figure 5.2, the injuries per 100 million VMT of the District from 2004 to 2009 were observed to be considerably higher than the national level rate. The observed injuries per 100 million VMT of the District emulated the following example. The national injury rate per 100 million VMT in 2003 showed an average of 100 (*Traffic Safety Facts 2008, NHTSA*), yet for metropolitan Baltimore, Maryland the injury rate per 100 million VMT was found to be approximately 227 (*Maryland Traffic Safety Facts 2003, Maryland Department of Transportation State Highway and Safety)*, a difference of approximately 127.

Table 5.2 Injury Rate from 2004 through 2009

Year		Injuries	Total VMT (Millions)	Injuries Per 100 Million VMT	Total Population	Injuries Per 100,000 Population
2004	Dist of Columbia	8,054	3,742	215.23	579,521	1389.77
	US	2,788,000	2,964,788	94.04	292,892,127	951.89
2005	Dist of Columbia	7,524	3,713	202.64	582,049	1292.67
	US	2,699,000	2,989,430	90.28	295,753,121	912.59
2006	Dist of Columbia	7,061	3,623	194.89	583,978	1209.12
	US	2,575,000	3,014,371	85.42	298,593,212	862.38
2007	Dist of Columbia	6,571	3,609	182.07	586,409	1120.55
	US	2,491,000	3,032,399	82.15	301,579,895	825.98
2008	Dist of Columbia	6,792	3,611	188.09	590,074	1151.04
	US	2,346,000	2,973,509	78.90	304,374,846	770.76
2009	Dist of Columbia	6,529	3607	181.01	599,657	1088.79
	US	2217000	2,979,321	74.41	307,006,550	722.13

All of the above figures were obtained from the NHTSA except for the injuries data of District of Columbia.

*The 2009 VMT data of District of Columbia was borrowed from 2008, since it is not yet available from the website of NHTSA (as of 09/20/2010).

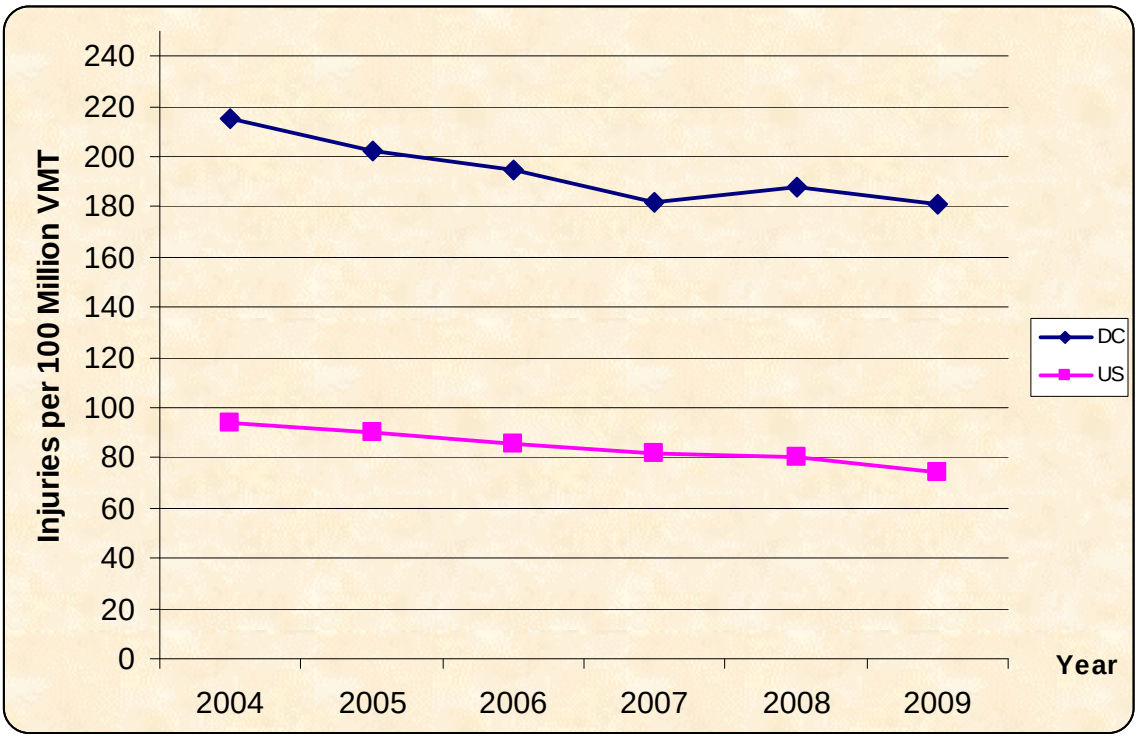

Figure 5.2 Injury Rate per 100 Million VMT from 2004 through 2009

CHAPTER 6 APPENDICES

6.1 Top 100 Hazard Intersections

6.1.1 Rank by Number of Crash

Table 6.1 Rank by Number of Crash for Each Year (Rank: 1~33)

INTERSECTION NAME	QUAD	2007		2008		2009	
		Num. Crash	Rank	Num. Crash	Rank	Num. Crash	Rank
NEW YORK AVE AND BLADENSBURG RD	NE	84	1	90	1	80	1
NEW YORK AVE AND NORTH CAPITOL ST	BN	56	2	42	7	57	2
KENILWORTH AVE AND BENNING RD	NE	27	31	49	3	54	3
WISCONSIN AVE AND M ST	NW	50	3	41	8	52	4
14TH ST AND K ST	NW	28	29	48	4	46	5
FLORIDA AVE AND NEW YORK AVE	NE	28	29	41	8	46	5
BENNING RD AND EAST CAPITOL ST	BN	30	24	30	24	44	7
14TH ST AND U ST	NW	30	24	43	6	43	8
MONTANA AVE AND NEW YORK AVE	NE	44	9	36	10	42	9
PENNS. AVE AND ANACOSTIA FRWY	SE	42	10	35	13	42	9
MINNESOTA AVE AND PENNS. AVE	SE	48	4	36	10	38	11
WISCONSIN AVE AND Q ST	NW	12	186	34	14	38	11
NEW JERSEY AVE AND NEW YORK AVE	NW	39	11	44	5	37	13
KENILWORTH AVE AND E. CAPITOL ST	BN	36	15	34	14	37	13
31ST ST AND M ST	NW	31	21	32	19	36	15
BRANCH AVE AND PENNSYLVANIA AVE	SE	33	18	26	28	35	16
MICHIGAN AVE AND NORTH CAPITOL ST	BN	21	44	18	90	35	16
7TH ST AND H ST	NW	46	6	30	24	34	18
14TH ST AND CONSTITUTION AVE	NW	36	15	33	17	32	19
I ST AND S CAPITOL ST	BN	37	13	32	19	32	19
STANTON RD AND SUITLAND PKWY	SE	35	17	32	19	32	19
KENILWORTH AVE AND NANNIE HELEN BURROUGHS AVE	NE	26	34	33	17	32	19
NEW YORK AVE AND S. DAKOTA AVE	NE	30	24	19	76	32	19
13TH ST AND U ST	NW	24	39	24	36	31	24
MINNESOTA AVE AND BENNING RD	NE	47	5	34	14	30	25
M ST AND NORTH CAPITOL ST	BN	23	41	25	33	30	25
EASTERN AVE AND KENILWORTH AVE	BN	32	20	14	158	30	25
19TH ST AND INDEPENDENCE AVE	SE	18	71	16	118	30	25
14TH ST AND IRVING ST	NW	12	186	17	103	30	25
PENNSYLVANIA AVE AND PROUT ST	SE	11	206	11	223	30	25
18TH ST AND ADAMS MILL RD	NW	18	71	26	28	29	31
FIRTH STERLING AVE AND SUITLAND PKWY	SE	45	8	54	2	28	32
M ST AND S CAPITOL ST	BN	24	39	25	33	28	32

Table 6.1 Rank by Number of Crash for Each Year (Rank: 34~66)

INTERSECTION NAME	QUAD	2007		2008		2009	
		Num. Crash	Rank	Num. Crash	Rank	Num. Crash	Rank
MASSACHUSETTS AVE AND DUPONT CIR	NW	25	37	23	39	28	32
14TH ST AND D ST	NW	20	57	24	36	28	32
NEW YORK AVE AND KENDALL ST	NE	20	57	23	39	28	32
K ST AND NORTH CAPITOL ST	BN	19	63	23	39	28	32
GEORGIA AVE AND PARK RD	NW	19	63	17	103	27	38
17TH ST AND I ST	NW	10	233	18	90	27	38
21ST ST AND K ST	NW	8	280	14	158	27	38
1ST ST AND NEW YORK AVE	NW	31	21	26	28	26	41
13TH ST AND SOUTHERN AVE	BN	19	63	19	76	26	41
SOUTHERN AVE AND WHEELER RD	BN	18	71	18	90	26	41
15TH ST AND K ST	NW	15	109	17	103	26	41
3RD ST AND FLORIDA AVE	NE	15	109	14	158	26	41
14TH ST AND COLUMBIA RD	NW	6	/	20	66	26	41
H ST AND NORTH CAPITOL ST	BN	46	6	32	19	25	47
NEW HAMPSHIRE AVE AND NORTH CAPITOL ST	BN	26	34	26	28	25	47
GEORGIA AVE AND MISSOURI AVE	NW	30	24	19	76	25	47
9TH ST AND CONSTITUTION AVE	NW	21	44	17	103	25	47
6TH ST AND NEW YORK AVE	NW	20	57	14	158	25	47
SOUTHERN AVE AND BENNING RD	BN	30	24	15	139	24	52
NEW YORK AVE AND FENWICK ST	NE	17	81	22	51	24	52
4TH ST AND NEW YORK AVE	NW	16	90	20	66	24	52
BENNING RD AND BLADENSBURG RD	NE	21	44	12	199	24	52
14TH ST AND F ST	NW	18	71	12	199	24	52
23RD ST AND WASHINGTON CIR	NW	13	154	18	90	23	57
DIVISION AVE AND SHERIFF RD	BN	16	90	15	139	23	57
EASTERN AVE AND ADDISON RD	BN	15	109	12	199	23	57
16TH ST AND IRVING ST	NW	9	260	16	118	23	57
SOUTH DAKOTA AVE AND BLADENSBURG RD	NE	27	31	21	58	22	61
FLORIDA AVE AND NORTH CAPITOL ST	BN	25	37	21	58	22	61
M ST AND FRANCIS SCOTT KEY BRIDGE	NW	21	44	9	257	22	61
8TH ST AND H ST	NE	11	206	15	139	22	61
PORTLAND ST AND S CAPITOL ST	BN	0	/	16	118	22	61
4TH ST AND NEW YORK AVE	NE	13	154	0	/	22	61

Table 6.1 Rank by Number of Crash for Each Year (Rank: 67~100)

INTERSECTION NAME	QUAD	2007		2008		2009	
		Num. Crash	Rank	Num. Crash	Rank	Num. Crash	Rank
17TH ST AND BENNING RD	NE	17	81	29	26	21	67
14TH ST AND I ST	NW	16	90	26	28	21	67
14TH ST AND RHODE ISLAND AVE	NW	15	109	25	33	21	67
SOUTHERN AVE AND EAST CAPITOL ST	BN	16	90	21	58	21	67
GEORGIA AVE AND BARRY PL	NW	10	233	23	39	21	67
PENNSYLVANIA AVE AND POTOMAC AVE	SE	18	71	14	158	21	67
FLORIDA AVE AND RHODE ISLAND AVE	NW	18	71	22	51	20	73
MINNESOTA AVE AND NANNIE HELEN BURROUGHS AVE	NE	26	34	13	177	20	73
FAIRLAWN AVE AND PENNSYLVANIA AVE	SE	14	131	20	66	20	73
16TH ST AND NEW HAMPSHIRE AVE	NW	13	154	19	76	20	73
7TH ST AND CONSTITUTION AVE	NW	16	90	11	223	20	73
N ST AND S CAPITOL ST	BN	13	154	12	199	20	73
7TH ST AND PENNSYLVANIA AVE	NW	14	131	9	257	20	73
15TH ST AND U ST	NW	10	233	12	199	20	73
1ST ST AND NEW YORK AVE	NE	37	13	36	10	19	81
16TH ST AND NEW YORK AVE	NE	21	44	18	90	19	81
ALABAMA AVE AND STANTON RD	SE	21	44	14	158	19	81
RHODE ISLAND AVE AND REED ST	NE	15	109	18	90	19	81
22ND ST AND EAST CAPITOL ST	BN	14	131	16	118	19	81
18TH ST AND K ST	NW	18	71	12	199	19	81
COLUMBIA RD AND ONTARIO RD	NW	6	/	19	76	19	81
BENNING RD AND G ST	SE	14	131	10	250	19	81
CONNECTICUT AVE AND L ST	NW	6	/	15	139	19	81
14TH ST AND MONROE ST	NW	5	/	13	177	19	81
14TH ST AND INDEPENDENCE AVE	SW	0	/	14	158	19	81
WEST VIRGINIA AVE AND MOUNT OLIVET RD	NE	31	21	23	39	18	92
NEBRASKA AVE AND WARD CIR	NW	23	41	19	76	18	92
19TH ST AND M ST	NW	21	44	18	90	18	92
16TH ST AND K ST	NW	14	131	19	76	18	92
27TH ST AND PENNSYLVANIA AVE	SE	15	109	13	177	18	92
FIRTH STERLING AVE AND HOWARD RD	SE	16	90	9	257	18	92
19TH ST AND E ST	NW	9	260	9	257	18	92
ALABAMA AVE AND GOOD HOPE RD	SE	8	280	8	284	18	92
CONNECTICUT AVE AND R ST	NW	5	/	8	284	18	92

Table 6.2 Rank by Number of Crash for Three Years (Rank: 1~33)

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Num. Crash	Rank	Num. Crash	Rank
NEW YORK AVE AND BLADENSBURG RD	NE	258	1	254	1
NEW YORK AVE AND NORTH CAPITOL ST	BN	152	3	155	2
WISCONSIN AVE AND M ST	NW	139	5	143	3
KENILWORTH AVE AND BENNING RD	NE	140	4	130	4
FIRTH STERLING AVE AND SUITLAND PKWY	SE	153	2	127	5
MONTANA AVE AND NEW YORK AVE	NE	121	7	122	6
14TH ST AND K ST	NW	113	13	122	6
MINNESOTA AVE AND PENNSYLVANIA AVE	SE	109	15	122	6
NEW JERSEY AVE AND NEW YORK AVE	NW	135	6	120	9
PENNSYLVANIA AVE AND ANACOSTIA FRWY	SE	99	19	119	10
14TH ST AND U ST	NW	117	9	116	11
FLORIDA AVE AND NEW YORK AVE	NE	119	8	115	12
MINNESOTA AVE AND BENNING RD	NE	114	10	111	13
7TH ST AND H ST	NW	110	14	110	14
KENILWORTH AVE AND EAST CAPITOL ST	BN	73	36	107	15
BENNING RD AND EAST CAPITOL ST	BN	89	22	104	16
H ST AND NORTH CAPITOL ST	BN	114	10	103	17
14TH ST AND CONSTITUTION AVE	NW	114	10	101	18
I ST AND S CAPITOL ST	BN	105	18	101	18
STANTON RD AND SUITLAND PKWY	SE	109	15	99	20
31ST ST AND M ST	NW	90	21	99	20
BRANCH AVE AND PENNSYLVANIA AVE	SE	97	20	94	22
1ST ST AND NEW YORK AVE	NE	108	17	92	23
KENILWORTH AVE AND NANNIE HELEN BURROUGHS AVE	NE	82	31	91	24
WISCONSIN AVE AND Q ST	NW	60	56	84	25
1ST ST AND NEW YORK AVE	NW	84	27	83	26
NEW YORK AVE AND SOUTH DAKOTA AVE	NE	83	29	81	27
13TH ST AND U ST	NW	74	35	79	28
M ST AND NORTH CAPITOL ST	BN	72	37	78	29
M ST AND S CAPITOL ST	BN	87	23	77	30
2ND ST AND H ST	NW	87	23	77	30
NEW HAMPSHIRE AVE AND NORTH CAPITOL ST	BN	80	32	77	30
3RD ST AND NEW YORK AVE	NW	78	33	77	30

Table 6.2 Rank by Number of Crash for Three Years (Rank: 34~66)

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Num. Crash	Rank	Num. Crash	Rank
EASTERN AVE AND KENILWORTH AVE	BN	84	27	76	34
MASSACHUSETTS AVE AND DUPONT CIR	NW	67	43	76	34
GEORGIA AVE AND MISSOURI AVE	NW	87	23	74	36
MICHIGAN AVE AND NORTH CAPITOL ST	BN	63	47	74	36
18TH ST AND ADAMS MILL RD	NW	83	29	73	38
WEST VIRGINIA AVE AND MOUNT OLIVET RD	NE	75	34	72	39
14TH ST AND D ST	NW	72	37	72	39
NEW YORK AVE AND KENDALL ST	NE	53	79	71	41
K ST AND NORTH CAPITOL ST	BN	70	40	70	42
SOUTH DAKOTA AVE AND BLADENSBURG RD	NE	70	40	70	42
SOUTHERN AVE AND BENNING RD	BN	63	47	69	44
FLORIDA AVE AND NORTH CAPITOL ST	BN	85	26	68	45
17TH ST AND BENNING RD	NE	58	62	67	46
MASSACHUSETTS AVE AND NORTH CAPITOL ST	BN	62	50	65	47
13TH ST AND SOUTHERN AVE	BN	62	50	64	48
19TH ST AND INDEPENDENCE AVE	SE	54	74	64	48
NEW YORK AVE AND FENWICK ST	NE	58	62	63	50
GEORGIA AVE AND PARK RD	NW	49	91	63	50
9TH ST AND CONSTITUTION AVE	NW	49	91	63	50
14TH ST AND I ST	NW	49	91	63	50
SOUTHERN AVE AND WHEELER RD	BN	61	53	62	54
14TH ST AND RHODE ISLAND AVE	NW	59	60	61	55
RHODE ISLAND AVE AND SOUTH DAKOTA AVE	NE	64	46	60	56
NEBRASKA AVE AND WARD CIR	NW	58	62	60	56
4TH ST AND NEW YORK AVE	NW	56	69	60	56
FLORIDA AVE AND RHODE ISLAND AVE	NW	53	79	60	56
MINNESOTA AVE AND NANNIE HELEN BURROUGHS AVE	NE	65	44	59	60
6TH ST AND NEW YORK AVE	NW	60	56	59	60
14TH ST AND IRVING ST	NW	47	102	59	60
SOUTHERN AVE AND EAST CAPITOL ST	BN	59	60	58	63
16TH ST AND NEW YORK AVE	NE	58	62	58	63
15TH ST AND K ST	NW	54	74	58	63
BENNING RD AND BLADENSBURG RD	NE	72	37	57	66

Table 6.2 Rank by Number of Crash for Three Years (Rank: 67~100)

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Num. Crash	Rank	Num. Crash	Rank
SOUTHERN AVE AND S CAPITOL ST	BN	61	53	57	66
14TH ST AND P ST	NW	60	56	57	66
19TH ST AND M ST	NW	52	86	57	66
CONNECTICUT AVE AND PORTER ST	NW	65	44	56	70
17TH ST AND I ST	NW	46	106	55	71
3RD ST AND FLORIDA AVE	NE	41	145	55	71
RHODE ISLAND AVE AND NORTH CAPITOL ST	BN	63	47	54	73
FAIRLAWN AVE AND PENNSYLVANIA AVE	SE	60	56	54	73
GEORGIA AVE AND BARRY PL	NW	57	67	54	73
23RD ST AND WASHINGTON CIR	NW	48	97	54	73
ALABAMA AVE AND STANTON RD	SE	47	102	54	73
DIVISION AVE AND SHERIFF RD	BN	46	106	54	73
14TH ST AND F ST	NW	40	157	54	73
PENNSYLVANIA AVE AND POTOMAC AVE	SE	47	102	53	80
4TH ST AND RHODE ISLAND AVE	NE	57	67	52	81
16TH ST AND NEW HAMPSHIRE AVE	NW	54	74	52	81
RHODE ISLAND AVE AND REED ST	NE	53	79	52	81
MARTIN LUTHER KING AVE AND HOWARD RD	SE	50	88	52	81
M ST AND FRANCIS SCOTT KEY BRIDGE	NW	43	127	52	81
14TH ST AND COLUMBIA RD	NW	42	137	52	81
PENNSYLVANIA AVE AND PROUT ST	SE	30	266	52	81
14TH ST AND L ST	NW	53	79	51	88
16TH ST AND K ST	NW	49	91	51	88
NORTH CAPITOL ST AND RIGGS RD	BN	48	97	50	90
15TH ST AND CONSTITUTION AVE	NW	47	102	50	90
EASTERN AVE AND ADDISON RD	BN	40	157	50	90
9TH ST AND PENNSYLVANIA AVE	NW	54	74	49	93
15TH ST AND I ST	NW	53	79	49	93
17TH ST AND PENNSYLVANIA AVE	NW	53	79	49	93
22ND ST AND EAST CAPITOL ST	BN	43	127	49	93
18TH ST AND K ST	NW	42	137	49	93
21ST ST AND K ST	NW	36	200	49	93
CONNECTICUT AVE AND NEBRASKA AVE	NW	61	53	48	99
1ST ST AND MICHIGAN AVE	NW	54	74	48	99

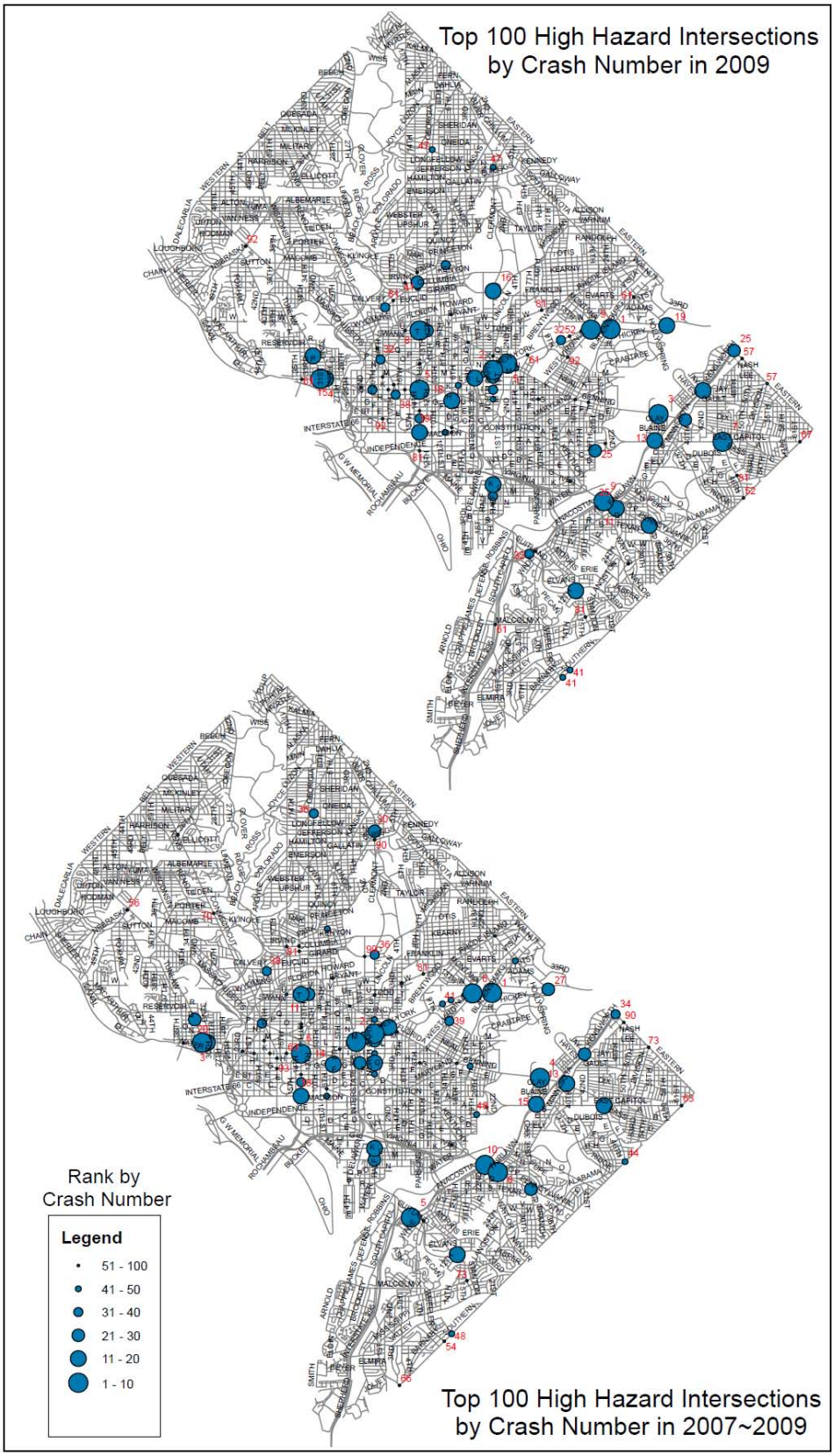

Figure 6.1 Top 100 High Hazard Intersections by Crash Number

6.1.2 Rank by Crash Rate

Table 6.3 Rank by Crash Rate for Each Year (Rank: 1~33)

INTERSECTION NAME	QUAD	2007		2008		2009	
		Crash Rate	Rank	Crash Rate	Rank	Crash Rate	Rank
19TH ST AND INDEPENDENCE AVE	SE	2.57	15	2.28	24	4.28	1
14TH ST AND U ST	NW	2.82	13	4.05	2	4.05	2
SOUTHERN AVE AND WHEELER RD	BN	2.71	14	2.71	12	3.91	3
WISCONSIN AVE AND Q ST	NW	1.23	97	3.48	4	3.89	4
SOUTHERN AVE AND NAYLOR RD	BN	4.11	4	3.56	3	3.84	5
WISCONSIN AVE AND M ST	NW	3.67	6	3.01	10	3.82	6
14TH ST AND V ST	NW	3.22	10	0.81	182	3.76	7
EASTERN AVE AND ADDISON RD	BN	2.38	24	1.91	46	3.65	8
14TH ST AND C ST	NE	4.76	1	4.47	1	3.57	9
GEORGIA AVE AND PARK RD	NW	2.46	20	2.20	27	3.50	10
SOUTHERN AVE AND BENNING RD	BN	4.25	3	2.12	32	3.40	11
7TH ST AND H ST	NW	4.53	2	2.95	11	3.34	12
14TH ST AND SPRING RD	NW	1.84	44	3.27	6	3.27	13
17TH ST AND I ST	NW	1.19	103	2.15	30	3.22	14
14TH ST AND MONROE ST	NW	0.85	166	2.21	26	3.22	14
MARTIN LUTHER KING AVE AND GOOD HOPE RD	SE	3.56	7	2.00	38	3.12	16
DIVISION AVE AND SHERIFF RD	BN	2.10	32	1.97	42	3.02	17
7TH ST AND G ST	NW	2.29	25	2.11	33	3.00	18
14TH ST AND IRVING ST	NW	1.13	108	1.61	64	2.83	19
GEORGIA AVE AND BARRY PL	NW	1.35	81	3.10	8	2.83	20
18TH ST AND ADAMS MILL RD	NW	1.75	51	2.53	16	2.82	21
SOUTHERN AVE AND S CAPITOL ST	BN	3.45	8	3.12	7	2.79	22
ALABAMA AVE AND GOOD HOPE RD	SE	1.23	95	1.23	112	2.78	23
14TH ST AND COLUMBIA RD	NW	0.63	202	2.09	35	2.71	24
FIRTH STERLING AVE AND HOWARD RD	SE	2.40	23	1.35	87	2.69	25
14TH ST AND K ST	NW	1.50	69	2.57	15	2.46	26
BENNING RD AND G ST	SE	1.79	45	1.28	100	2.43	27
NEW YORK AVE AND BLADENSBURG RD	NE	2.49	18	2.66	13	2.37	28
9TH ST AND F ST	NW	1.75	52	1.17	124	2.33	29
ALABAMA AVE AND STANTON RD	SE	2.54	17	1.69	58	2.30	30
13TH ST AND U ST	NW	1.77	48	1.77	56	2.28	31
BRANCH AVE AND PENNSYLVANIA AVE	SE	2.13	30	1.68	59	2.26	32
BENNING RD AND EAST CAPITOL ST	BN	1.53	67	1.53	72	2.24	33

Table 6.3 Rank by Crash Rate for Each Year (Rank: 34~66)

INTERSECTION NAME	QUAD	2007		2008		2009	
		Crash Rate	Rank	Crash Rate	Rank	Crash Rate	Rank
14TH ST AND D ST	NW	1.58	63	1.89	49	2.21	34
3RD ST AND FLORIDA AVE	NE	1.26	91	1.18	119	2.19	35
24TH ST AND M ST	NW	1.87	42	1.00	152	2.12	36
8TH ST AND H ST	NW	1.75	53	2.62	14	2.09	37
MARTIN LUTHER KING AVE AND HOWARD RD	SE	2.21	28	2.47	18	2.08	38
14TH ST AND RHODE ISLAND AVE	NW	1.45	72	2.42	19	2.03	39
15TH ST AND U ST	NW	0.99	133	1.19	118	1.98	40
1ST ST AND MASSACHUSETTS AVE	NE	1.63	58	3.42	5	1.96	41
ALABAMA AVE AND NAYLOR RD	SE	1.56	65	1.17	123	1.95	42
WEST VIRGINIA AVE AND MOUNT OLIVET RD	NE	3.35	9	2.49	17	1.95	43
14TH ST AND F ST	NW	1.46	71	0.97	153	1.95	43
8TH ST AND H ST	NE	0.97	137	1.33	90	1.94	45
WISCONSIN AVE AND N ST	NW	1.29	87	2.33	22	1.94	46
STANTON RD AND SUITLAND PKWY	SE	2.10	31	1.92	44	1.92	47
MINNESOTA AVE AND NANNIE HELEN BURROUGHS AVE	NE	2.48	19	1.24	108	1.91	48
MINNESOTA AVE AND BENNING RD	NE	2.97	11	2.15	29	1.90	49
21ST ST AND K ST	NW	0.55	213	0.97	154	1.87	50
7TH ST AND E ST	NW	1.27	89	1.27	102	1.85	51
3RD ST AND D ST	NW	2.23	27	1.64	63	1.79	52
23RD ST AND ALABAMA AVE	SE	1.91	39	0.73	194	1.76	53
NEW JERSEY AVE AND E ST	NW	2.27	26	1.92	43	1.75	54
SOUTHERN AVE AND EAST CAPITOL ST	BN	1.32	83	1.74	57	1.74	55
14TH ST AND FLORIDA AVE	NW	2.05	33	2.36	21	1.73	56
5TH ST AND H ST	NW	1.14	107	2.17	28	1.71	57
14TH ST AND P ST	NW	1.99	35	2.30	23	1.67	58
6TH ST AND NEW YORK AVE	NW	1.34	82	0.94	160	1.67	59
25TH ST AND GOOD HOPE RD	SE	1.43	74	0.66	201	1.65	60
MONTANA AVE AND NEW YORK AVE	NE	1.71	54	1.40	82	1.63	61
GEORGIA AVE AND MORTON ST	NW	1.12	112	1.24	111	1.61	62
BRENTWOOD RD AND W ST	NE	1.23	96	1.97	41	1.60	63
FIRTH STERLING AVE AND SUITLAND PKWY	SE	2.56	16	3.07	9	1.59	64
11TH ST AND H ST	NW	1.59	61	1.80	53	1.59	65
3RD ST AND H ST	NE	1.25	92	0.79	184	1.58	66

Table 6.3 Rank by Crash Rate for Each Year (Rank: 67~100)

INTERSECTION NAME	QUAD	2007		2008		2009	
		Crash Rate	Rank	Crash Rate	Rank	Crash Rate	Rank
MICHIGAN AVE AND NORTH CAPITOL ST	BN	0.95	139	0.81	181	1.58	67
15TH ST AND PENNSYLVANIA AVE	NW	2.42	21	1.45	79	1.57	68
BRENTWOOD PKWY AND MOUNT OLIVET RD	NE	0.78	179	1.23	113	1.57	69
K ST AND NORTH CAPITOL ST	BN	1.05	122	1.28	101	1.55	70
H ST AND NORTH CAPITOL ST	BN	2.86	12	1.99	39	1.55	71
I ST AND S CAPITOL ST	BN	1.79	46	1.55	70	1.55	72
15TH ST AND K ST	NW	0.89	155	1.00	151	1.54	73
4TH ST AND NEW YORK AVE	NW	1.02	126	1.27	104	1.53	74
19TH ST AND M ST	NW	1.76	49	1.51	74	1.51	75
14TH ST AND KENYON PL	NW	0.90	149	2.11	34	1.51	76
MINNESOTA AVE AND PENNSYLVANIA AVE	SE	1.90	41	1.42	81	1.50	77
NEW JERSEY AVE AND NEW YORK AVE	NW	1.58	62	1.78	54	1.50	78
GEORGIA AVE AND KENNEDY ST	NW	1.39	77	0.96	155	1.50	79
6TH ST AND H ST	NW	1.92	37	1.17	122	1.49	80
14TH ST AND I ST	NW	1.13	109	1.84	51	1.48	81
GEORGIA AVE AND MISSOURI AVE	NW	1.77	47	1.12	127	1.48	82
16TH ST AND IRVING ST	NW	0.58	209	1.02	149	1.47	83
11TH ST AND K ST	NW	1.31	84	1.89	48	1.46	84
FLORIDA AVE AND NEW YORK AVE	NE	0.88	157	1.29	95	1.45	85
WISCONSIN AVE AND CALVERT ST	NW	0.87	162	1.54	71	1.44	86
19TH ST AND L ST	NW	0.81	172	0.54	221	1.44	87
GEORGIA AVE AND IRVING ST	NW	0.76	183	1.24	108	1.43	88
7TH ST AND PENNSYLVANIA AVE	NW	0.99	131	0.64	209	1.42	89
NEW YORK AVE AND NORTH CAPITOL ST	BN	1.38	78	1.04	146	1.41	90
GEORGIA AVE AND BRYANT ST	NW	1.96	36	1.82	52	1.40	91
CONNECTICUT AVE AND R ST	NW	0.39	237	0.62	214	1.39	92
11TH ST AND U ST	NW	0.85	163	0.85	173	1.39	93
14TH ST AND EUCLID ST	NW	1.22	100	1.90	47	1.36	94
9TH ST AND H ST	NW	1.43	73	1.34	88	1.34	95
9TH ST AND CONSTITUTION AVE	NW	1.12	110	0.91	164	1.34	96
14TH ST AND W ST	NW	2.41	22	2.41	20	1.32	97
19TH ST AND E ST	NW	0.66	199	0.66	202	1.31	98
16TH ST AND EUCLID ST	NW	0.82	170	1.30	92	1.30	99
33RD ST AND M ST	NW	1.05	123	1.29	96	1.29	100

Table 6.4 Rank by Crash Rate for Three Years (Rank: 1~33)

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Crash Rate	Rank	Crash Rate	Rank
14TH ST AND C ST	NE	4.37	1	4.27	1
SOUTHERN AVE AND NAYLOR RD	BN	3.38	5	3.84	2
14TH ST AND U ST	NW	3.67	2	3.64	3
7TH ST AND H ST	NW	3.61	3	3.61	4
WISCONSIN AVE AND M ST	NW	3.40	4	3.50	5
SOUTHERN AVE AND BENNING RD	BN	2.97	8	3.26	6
SOUTHERN AVE AND S CAPITOL ST	BN	3.34	6	3.12	7
SOUTHERN AVE AND WHEELER RD	BN	3.06	7	3.11	8
19TH ST AND INDEPENDENCE AVE	SE	2.57	14	3.04	9
MARTIN LUTHER KING AVE AND GOOD HOPE RD	SE	2.30	20	2.90	10
WISCONSIN AVE AND Q ST	NW	2.05	32	2.87	11
14TH ST AND SPRING RD	NW	2.86	10	2.79	12
GEORGIA AVE AND PARK RD	NW	2.12	26	2.72	13
EASTERN AVE AND ADDISON RD	BN	2.12	25	2.65	14
14TH ST AND V ST	NW	2.06	31	2.60	15
WEST VIRGINIA AVE AND MOUNT OLIVET RD	NE	2.70	12	2.59	16
NEW YORK AVE AND BLADENSBURG RD	NE	2.54	16	2.51	17
7TH ST AND G ST	NW	2.00	36	2.47	18
GEORGIA AVE AND BARRY PL	NW	2.56	15	2.42	19
FIRTH STERLING AVE AND SUITLAND PKWY	SE	2.90	9	2.41	20
18TH ST AND ADAMS MILL RD	NW	2.69	13	2.37	21
DIVISION AVE AND SHERIFF RD	BN	2.01	35	2.36	22
MINNESOTA AVE AND BENNING RD	NE	2.40	17	2.34	23
1ST ST AND MASSACHUSETTS AVE	NE	2.39	18	2.34	24
MARTIN LUTHER KING AVE AND HOWARD RD	SE	2.17	24	2.26	25
17TH ST AND I ST	NW	1.83	44	2.19	26
ALABAMA AVE AND STANTON RD	SE	1.90	42	2.18	27
14TH ST AND K ST	NW	2.02	34	2.18	28
8TH ST AND H ST	NW	1.80	50	2.15	29
FIRTH STERLING AVE AND HOWARD RD	SE	1.90	41	2.15	30
H ST AND NORTH CAPITOL ST	BN	2.36	19	2.13	31
14TH ST AND MONROE ST	NW	1.81	47	2.09	32
14TH ST AND FLORIDA AVE	NW	2.05	33	2.05	33

Table 6.4 Rank by Crash Rate for Three Years (Rank: 34~66)

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Crash Rate	Rank	Crash Rate	Rank
14TH ST AND W ST	NW	2.70	11	2.05	34
BRANCH AVE AND PENNSYLVANIA AVE	SE	2.08	28	2.02	35
14TH ST AND P ST	NW	2.09	27	1.99	36
STANTON RD AND SUITLAND PKWY	SE	2.18	23	1.98	37
NEW JERSEY AVE AND E ST	NW	1.92	38	1.98	38
14TH ST AND RHODE ISLAND AVE	NW	1.90	40	1.97	39
13TH ST AND U ST	NW	1.82	46	1.94	40
14TH ST AND D ST	NW	1.89	43	1.89	41
3RD ST AND D ST	NW	1.79	52	1.89	42
11TH ST AND M ST	NW	2.06	30	1.89	43
MINNESOTA AVE AND NANNIE HELEN BURROUGHS AVE	NE	2.07	29	1.88	44
14TH ST AND IRVING ST	NW	1.48	73	1.86	45
WISCONSIN AVE AND N ST	NW	1.81	48	1.85	46
BENNING RD AND G ST	SE	1.62	62	1.83	47
15TH ST AND PENNSYLVANIA AVE	NW	2.22	22	1.81	48
14TH ST AND COLUMBIA RD	NW	1.46	74	1.81	49
BENNING RD AND EAST CAPITOL ST	BN	1.51	70	1.77	50
ALABAMA AVE AND GOOD HOPE RD	SE	1.54	67	1.75	51
9TH ST AND F ST	NW	1.60	63	1.75	52
23RD ST AND SOUTHERN AVE	BN	1.92	37	1.74	53
GEORGIA AVE AND BRYANT ST	NW	1.92	39	1.73	54
SOUTHERN AVE AND SUITLAND RD	BN	1.81	49	1.70	55
5TH ST AND H ST	NW	1.75	55	1.67	56
24TH ST AND M ST	NW	1.41	81	1.66	57
11TH ST AND H ST	NW	1.45	78	1.66	58
I ST AND S CAPITOL ST	BN	1.69	58	1.63	59
NEW JERSEY AVE AND NEW YORK AVE	NW	1.82	45	1.62	60
MINNESOTA AVE AND PENNSYLVANIA AVE	SE	1.44	80	1.61	61
BRENTWOOD RD AND W ST	NE	1.52	69	1.60	62
SOUTHERN AVE AND EAST CAPITOL ST	BN	1.63	61	1.60	63
19TH ST AND M ST	NW	1.45	75	1.59	64
MONTANA AVE AND NEW YORK AVE	NE	1.57	66	1.58	65
7TH ST AND I ST	NW	1.74	56	1.58	66

Table 6.4 Rank by Crash Rate for Three Years (Rank: 67~100)

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Crash Rate	Rank	Crash Rate	Rank
1ST ST AND MICHIGAN AVE	NW	1.77	54	1.58	67
2ND ST AND H ST	NW	1.78	53	1.57	68
ALABAMA AVE AND NAYLOR RD	SE	1.30	93	1.56	69
11TH ST AND K ST	NW	1.80	51	1.55	70
3RD ST AND FLORIDA AVE	NE	1.15	114	1.54	71
6TH ST AND H ST	NW	1.45	76	1.53	72
14TH ST AND KENYON PL	NW	1.37	83	1.51	73
14TH ST AND EUCLID ST	NW	1.36	85	1.50	74
14TH ST AND I ST	NW	1.15	113	1.48	75
15TH ST AND I ST	NW	1.59	64	1.47	76
23RD ST AND ALABAMA AVE	SE	1.18	109	1.47	77
7TH ST AND E ST	NW	1.08	127	1.47	78
14TH ST AND F ST	NW	1.08	128	1.46	79
GEORGIA AVE AND MISSOURI AVE	NW	1.71	57	1.46	80
17TH ST AND PENNSYLVANIA AVE	NW	1.57	65	1.45	81
8TH ST AND H ST	NE	1.30	94	1.41	82
4TH ST AND RHODE ISLAND AVE	NE	1.54	68	1.40	83
15TH ST AND U ST	NW	1.16	112	1.39	84
MASSACHUSETTS AVE AND NORTH CAPITOL ST	BN	1.32	90	1.38	85
9TH ST AND H ST	NW	1.37	84	1.37	86
SOUTH DAKOTA AVE AND BLADENSBURG RD	NE	1.33	88	1.33	87
1ST ST AND K ST	NW	1.49	72	1.32	88
GEORGIA AVE AND MORTON ST	NW	1.45	77	1.32	89
6TH ST AND NEW YORK AVE	NW	1.34	86	1.32	90
K ST AND NORTH CAPITOL ST	BN	1.30	95	1.30	91
WISCONSIN AVE AND CALVERT ST	NW	1.44	79	1.28	92
GEORGIA AVE AND KENNEDY ST	NW	1.14	117	1.28	93
16TH ST AND V ST	NW	1.31	92	1.28	94
NEW YORK AVE AND NORTH CAPITOL ST	BN	1.25	102	1.27	95
4TH ST AND NEW YORK AVE	NW	1.19	107	1.27	96
GOOD HOPE RD AND NAYLOR RD	SE	2.22	21	1.27	97
25TH ST AND GOOD HOPE RD	SE	1.06	130	1.25	98
13TH ST AND K ST	NW	1.22	104	1.24	99
EASTERN AVE AND BLADENSBURG RD	BN	1.33	89	1.23	100

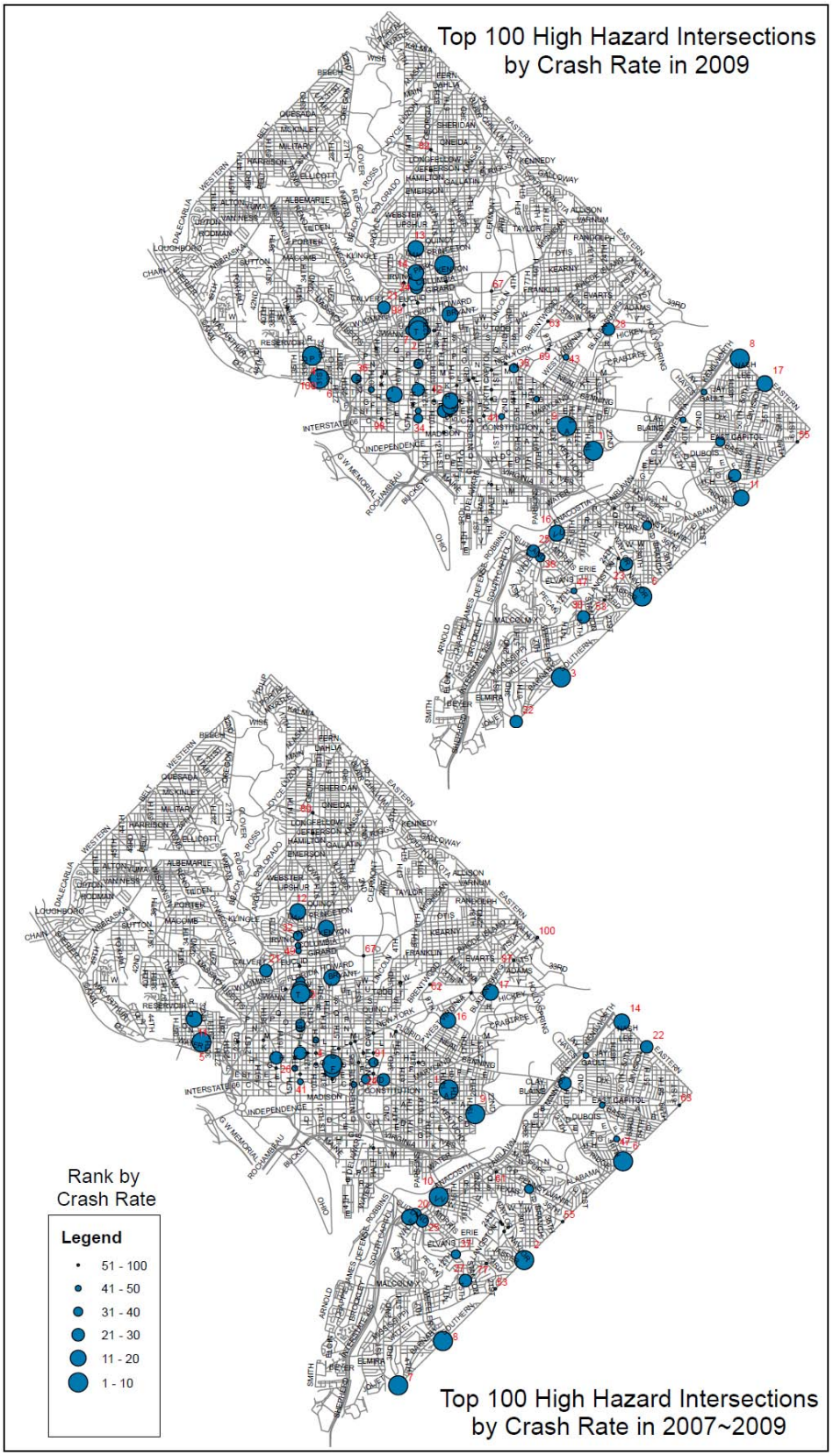

Figure 6.2 Top 100 High Hazard Intersections by Crash Rate

6.1.3 Rank by Crash Cost

Table 6.5 Rank by Crash Cost for Each Year (Rank: 1~33)

INTERSECTION NAME	QUAD	2007		2008		2009	
		Crash Cost	Rank	Crash Cost	Rank	Crash Cost	Rank
NEW YORK AVE AND BLADENSBURG RD	NE	993	1	1197	1	903	1
NEW YORK AVE AND NORTH CAPITOL ST	BN	738	2	474	11	738	2
KENILWORTH AVE AND EAST CAPITOL ST	BN	605	5	681	4	704	3
BENNING RD AND EAST CAPITOL ST	BN	315	46	300	44	672	4
KENILWORTH AVE AND BENNING RD	NE	423	23	660	5	656	5
MONTANA AVE AND NEW YORK AVE	NE	551	9	497	9	612	6
NEW YORK AVE AND SOUTH DAKOTA AVE	NE	498	13	210	94	597	7
WISCONSIN AVE AND M ST	NW	450	18	392	23	594	8
H ST AND NORTH CAPITOL ST	BN	570	8	384	25	593	9
STANTON RD AND SUITLAND PKWY	SE	422	24	429	15	558	10
NEW JERSEY AVE AND NEW YORK AVE	NW	503	12	686	3	557	11
FLORIDA AVE AND NEW YORK AVE	NE	330	42	618	6	540	12
PENNSYLVANIA AVE AND ANACOSTIA FRWY	SE	635	4	428	16	533	13
FIRTH STERLING AVE AND SUITLAND PKWY	SE	662	3	936	2	530	14
MICHIGAN AVE AND NORTH CAPITOL ST	BN	240	77	203	104	482	15
MINNESOTA AVE AND PENNSYLVANIA AVE	SE	594	6	345	32	474	16
13TH ST AND SOUTHERN AVE	BN	272	57	272	59	459	17
1ST ST AND NEW YORK AVE	NW	467	16	315	38	428	18
GEORGIA AVE AND PINEY BRANCH RD	NW	120	213	150	174	426	19
BENNING RD AND G ST	SE	248	71	120	232	425	20
I ST AND S CAPITOL ST	BN	542	10	422	17	413	21
31ST ST AND M ST	NW	255	67	300	44	408	22
14TH ST AND CONSTITUTION AVE	NW	315	46	368	27	399	23
GEORGIA AVE AND PARK RD	NW	188	126	158	167	393	24
14TH ST AND K ST	NW	324	44	557	7	383	25
14TH ST AND U ST	NW	300	48	390	24	383	25
8TH ST AND H ST	NE	213	99	143	183	380	27
SOUTHERN AVE AND CHESAPEAKE ST	BN	243	73	195	118	380	27
7TH ST AND H ST	NW	435	19	293	47	369	29
9TH ST AND CONSTITUTION AVE	NW	387	29	264	62	362	30
14TH ST AND IRVING ST	NW	120	213	219	87	362	30
KENILWORTH AVE AND NANNIE HELEN BURROUGHS AVE	NE	492	14	497	9	353	32
WISCONSIN AVE AND Q ST	NW	120	213	308	41	353	32

Table 6.5 Rank by Crash Cost for Each Year (Rank: 34~66)

INTERSECTION NAME	QUAD	2007		2008		2009	
		Crash Cost	Rank	Crash Cost	Rank	Crash Cost	Rank
EASTERN AVE AND KENILWORTH AVE	BN	453	17	195	118	347	34
3RD ST AND H ST	NE	143	184	68	/	341	35
PENNSYLVANIA AVE AND PROUT ST	SE	113	229	212	90	338	36
GEORGIA AVE AND GERANIUM ST	NW	242	75	128	219	338	36
IRVING ST AND PARK PL	NW	53	310	411	19	335	38
MASSACHUSETTS AVE AND DUPONT CIR	NW	225	90	257	64	332	39
2ND ST AND H ST	NW	527	11	435	14	324	40
15TH ST AND K ST	NW	204	110	242	73	324	40
M ST AND NORTH CAPITOL ST	BN	240	77	446	12	323	42
NEW HAMPSHIRE AVE AND NORTH CAPITOL ST	BN	323	45	278	56	323	42
GEORGIA AVE AND BARRY PL	NW	213	99	309	40	318	44
NORTH CAPITOL ST AND RIGGS RD	BN	105	244	225	79	318	44
FLORIDA AVE AND RHODE ISLAND AVE	NW	188	126	248	71	317	46
20TH ST AND K ST	NW	98	255	251	68	311	47
PORTLAND ST AND S CAPITOL ST	BN	0	319	210	94	309	48
DIVISION AVE AND SHERIFF RD	BN	165	157	242	73	308	49
MINNESOTA AVE AND CLAY PL	NE	98	255	129	216	302	50
BRANCH AVE AND PENNSYLVANIA AVE	SE	353	36	399	21	300	51
M ST AND S CAPITOL ST	BN	263	62	255	66	300	51
19TH ST AND INDEPENDENCE AVE	SE	195	120	150	174	300	51
SOUTHERN AVE AND BENNING RD	BN	476	15	195	118	293	54
SOUTHERN AVE AND WHEELER RD	BN	249	69	293	47	293	54
MARTIN LUTHER KING AVE AND HOWARD RD	SE	264	60	263	63	287	56
MINNESOTA AVE AND BENNING RD	NE	572	7	323	36	285	57
GEORGIA AVE AND MISSOURI AVE	NW	384	31	180	140	285	57
3RD ST AND FLORIDA AVE	NE	273	54	135	201	285	57
CONNECTICUT AVE AND R ST	NW	38	/	68	/	281	60
ALTAMONT PL AND GOOD HOPE RD	SE	128	199	128	219	279	61
16TH ST AND K ST	NW	120	213	333	33	273	62
CLERMONT DR AND FORT DR	BN	243	73	144	182	273	62
13TH ST AND U ST	NW	333	39	294	46	270	64
NEW YORK AVE AND KENDALL ST	NE	203	112	255	66	270	64
NEW YORK AVE AND FENWICK ST	NE	248	71	332	34	270	64

Table 6.5 Rank by Crash Cost for Each Year (Rank: 67~100)

INTERSECTION NAME	QUAD	2007		2008		2009	
		Crash Cost	Rank	Crash Cost	Rank	Crash Cost	Rank
BRENTWOOD RD AND W ST	NE	128	199	266	61	266	67
16TH ST AND NEW HAMPSHIRE AVE	NW	251	68	188	129	264	68
K ST AND NORTH CAPITOL ST	BN	195	120	210	94	263	69
4TH ST AND NEW YORK AVE	NW	195	120	218	88	263	69
21ST ST AND K ST	NW	75	293	212	90	263	69
SOUTHERN AVE AND NAYLOR RD	BN	227	86	188	129	263	69
7TH ST AND CONSTITUTION AVE	NW	188	126	128	219	257	73
ALABAMA AVE AND GOOD HOPE RD	SE	98	255	90	280	257	73
MICHIGAN AVE AND FRANKLIN ST	NE	113	229	45	317	257	73
18TH ST AND ADAMS MILL RD	NW	150	175	248	71	255	76
14TH ST AND D ST	NW	287	50	210	94	255	76
EASTERN AVE AND ADDISON RD	BN	173	143	113	249	255	76
16TH ST AND NEW YORK AVE	NE	272	57	173	147	249	79
12TH ST AND RHODE ISLAND AVE	NE	143	184	225	79	249	79
MICHIGAN AVE AND SOUTH DAKOTA AVE	NE	218	96	366	28	249	79
NORTH CAPITOL ST AND R ST	BN	356	35	113	249	249	79
17TH ST AND BENNING RD	NE	264	60	270	60	248	83
SOUTHERN AVE AND EAST CAPITOL ST	BN	417	26	317	37	248	83
ALABAMA AVE AND STANTON RD	SE	240	77	180	140	248	83
FAIRVIEW AVE AND NEW YORK AVE	NE	158	167	195	118	243	86
GEORGIA AVE AND RANDOLPH ST	NW	173	143	128	219	242	87
MARTIN LUTHER KING AVE AND STANTON RD	SE	173	143	419	18	242	87
9TH ST AND NEW YORK AVE	NE	98	255	188	129	242	87
22ND ST AND EAST CAPITOL ST	BN	180	135	195	118	240	90
19TH ST AND E ST	NW	143	184	159	165	240	90
4TH ST AND NEW YORK AVE	NE	167	155	0	/	240	90
14TH ST AND C ST	NE	128	199	143	183	236	93
CONNECTICUT AVE AND L ST	NW	68	/	143	183	234	94
14TH ST AND COLUMBIA RD	NW	68	/	188	129	233	95
27TH ST AND PENNSYLVANIA AVE	SE	158	167	197	112	233	95
34TH ST AND BENNING RD	NE	233	83	173	147	233	95
OKLAHOMA AVE AND BENNING RD	NE	135	191	165	157	227	98
BRENTWOOD PKWY AND MOUNT OLIVET RD	NE	152	173	135	201	227	98
18TH ST AND L ST	NW	90	269	23	/	227	98

Table 6.6 Rank by Crash Cost for Three Years (Rank: 1~33)

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Crash Cost	Rank	Crash Cost	Rank
NEW YORK AVE AND BLADENSBURG RD	NE	3815	1	3094	1
FIRTH STERLING AVE AND SUITLAND PKWY	SE	2611	2	2128	2
KENILWORTH AVE AND EAST CAPITOL ST	BN	1331	12	1990	3
NEW YORK AVE AND NORTH CAPITOL ST	BN	1827	5	1951	4
NEW JERSEY AVE AND NEW YORK AVE	NW	1841	4	1745	5
KENILWORTH AVE AND BENNING RD	NE	1916	3	1739	6
MONTANA AVE AND NEW YORK AVE	NE	1583	7	1660	7
PENNSYLVANIA AVE AND ANACOSTIA FRWY	SE	1386	10	1595	8
H ST AND NORTH CAPITOL ST	BN	1481	8	1547	9
FLORIDA AVE AND NEW YORK AVE	NE	1596	6	1488	10
WISCONSIN AVE AND M ST	NW	1239	19	1436	11
MINNESOTA AVE AND PENNSYLVANIA AVE	SE	1391	9	1413	12
STANTON RD AND SUITLAND PKWY	SE	1383	11	1409	13
I ST AND S CAPITOL ST	BN	1308	14	1376	14
KENILWORTH AVE AND NANNIE HELEN BURROUGHS AVE	NE	1289	15	1341	15
NEW YORK AVE AND SOUTH DAKOTA AVE	NE	1238	20	1306	16
BENNING RD AND EAST CAPITOL ST	BN	975	35	1287	17
2ND ST AND H ST	NW	1322	13	1286	18
14TH ST AND K ST	NW	1257	18	1263	19
1ST ST AND NEW YORK AVE	NW	1074	30	1209	20
MINNESOTA AVE AND BENNING RD	NE	1269	16	1179	21
7TH ST AND H ST	NW	1136	25	1097	22
14TH ST AND CONSTITUTION AVE	NW	1155	24	1082	23
WEST VIRGINIA AVE AND MOUNT OLIVET RD	NE	1086	28	1079	24
14TH ST AND U ST	NW	1187	22	1073	25
BRANCH AVE AND PENNSYLVANIA AVE	SE	1172	23	1052	26
9TH ST AND CONSTITUTION AVE	NW	779	58	1013	27
M ST AND NORTH CAPITOL ST	BN	956	36	1008	28
1ST ST AND NEW YORK AVE	NE	1260	17	1005	29
13TH ST AND SOUTHERN AVE	BN	890	41	1002	30
EASTERN AVE AND KENILWORTH AVE	BN	1076	29	995	31
SOUTHERN AVE AND EAST CAPITOL ST	BN	1127	26	981	32
31ST ST AND M ST	NW	765	61	963	33

Table 6.6 Rank by Crash Cost for Three Years (Rank: 34~66)

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Crash Cost	Rank	Crash Cost	Rank
SOUTHERN AVE AND BENNING RD	BN	911	38	963	33
MICHIGAN AVE AND NORTH CAPITOL ST	BN	720	72	924	35
NEW HAMPSHIRE AVE AND NORTH CAPITOL ST	BN	932	37	923	36
13TH ST AND U ST	NW	996	33	897	37
FLORIDA AVE AND NORTH CAPITOL ST	BN	1191	21	888	38
RHODE ISLAND AVE AND NORTH CAPITOL ST	BN	1006	32	878	39
MINNESOTA AVE AND NANNIE HELEN BURROUGHS AVE	NE	978	34	873	40
3RD ST AND NEW YORK AVE	NW	858	48	851	41
GEORGIA AVE AND MISSOURI AVE	NW	1070	31	849	42
NEW YORK AVE AND FENWICK ST	NE	890	41	849	42
SOUTH DAKOTA AVE AND BLADENSBURG RD	NE	887	43	842	44
GEORGIA AVE AND BARRY PL	NW	747	65	841	45
SOUTHERN AVE AND WHEELER RD	BN	789	56	834	46
MICHIGAN AVE AND SOUTH DAKOTA AVE	NE	865	46	833	47
MARTIN LUTHER KING AVE AND STANTON RD	SE	696	76	833	47
PENNSYLVANIA AVE AND POTOMAC AVE	SE	807	54	828	49
SOUTHERN AVE AND CHESAPEAKE ST	BN	863	47	818	50
M ST AND S CAPITOL ST	BN	1091	27	818	51
MASSACHUSETTS AVE AND DUPONT CIR	NW	647	86	813	52
MARTIN LUTHER KING AVE AND HOWARD RD	SE	746	66	813	52
1ST ST AND MICHIGAN AVE	NW	828	52	800	54
IRVING ST AND PARK PL	NW	599	102	799	55
SOUTHERN AVE AND S CAPITOL ST	BN	882	44	798	56
25TH ST AND SOUTHERN AVE	BN	901	39	794	57
BENNING RD AND G ST	SE	548	124	792	58
6TH ST AND NEW YORK AVE	NW	806	55	783	59
MASSACHUSETTS AVE AND NORTH CAPITOL ST	BN	722	71	783	59
17TH ST AND BENNING RD	NE	714	73	782	61
WISCONSIN AVE AND Q ST	NW	533	134	780	62
15TH ST AND K ST	NW	764	62	770	63
FLORIDA AVE AND RHODE ISLAND AVE	NW	600	100	752	64
14TH ST AND D ST	NW	836	51	752	64
MARTIN LUTHER KING AVE AND MILWAUKEE PL	SE	850	50	743	66

Table 6.6 Rank by Crash Cost for Three Years (Rank: 67~100)

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Crash Cost	Rank	Crash Cost	Rank
GEORGIA AVE AND PARK RD	NW	549	120	738	67
8TH ST AND H ST	NE	627	88	736	68
7TH ST AND FLORIDA AVE	NW	676	81	728	69
NEW YORK AVE AND KENDALL ST	NE	533	134	728	70
16TH ST AND K ST	NW	603	98	726	71
NORTH CAPITOL ST AND R ST	BN	596	104	717	72
DIVISION AVE AND SHERIFF RD	BN	549	120	714	73
RHODE ISLAND AVE AND SOUTH DAKOTA AVE	NE	774	59	714	73
GEORGIA AVE AND GERANIUM ST	NW	519	139	707	75
16TH ST AND NEW HAMPSHIRE AVE	NW	725	70	702	76
14TH ST AND IRVING ST	NW	519	139	701	77
GEORGIA AVE AND PINEY BRANCH RD	NW	459	170	696	78
3RD ST AND FLORIDA AVE	NE	543	127	693	79
16TH ST AND NEW YORK AVE	NE	692	77	693	79
14TH ST AND P ST	NW	746	66	693	79
SOUTHERN AVE AND NAYLOR RD	BN	542	129	677	82
4TH ST AND NEW YORK AVE	NW	615	92	675	83
4TH ST AND RHODE ISLAND AVE	NE	755	64	671	84
K ST AND NORTH CAPITOL ST	BN	705	74	668	85
ALABAMA AVE AND STANTON RD	SE	594	105	668	85
FIRTH STERLING AVE AND S CAPITOL ST	BN	609	96	665	87
PENNSYLVANIA AVE AND PROUT ST	SE	407	215	662	88
CLERMONT DR AND FORT DR	BN	895	40	661	89
20TH ST AND K ST	NW	468	160	659	90
BRENTWOOD RD AND W ST	NE	590	106	659	90
14TH ST AND SPRING RD	NW	603	98	657	92
18TH ST AND ADAMS MILL RD	NW	782	57	653	93
NORTH CAPITOL ST AND RIGGS RD	BN	564	112	648	94
FAIRLAWN AVE AND PENNSYLVANIA AVE	SE	854	49	648	94
14TH ST AND I ST	NW	564	112	647	96
19TH ST AND INDEPENDENCE AVE	SE	578	109	645	97
EASTERN AVE AND NEW HAMPSHIRE AVE	BN	651	85	644	98
34TH ST AND BENNING RD	NE	668	82	638	99
17TH ST AND PENNSYLVANIA AVE	NW	534	133	627	100

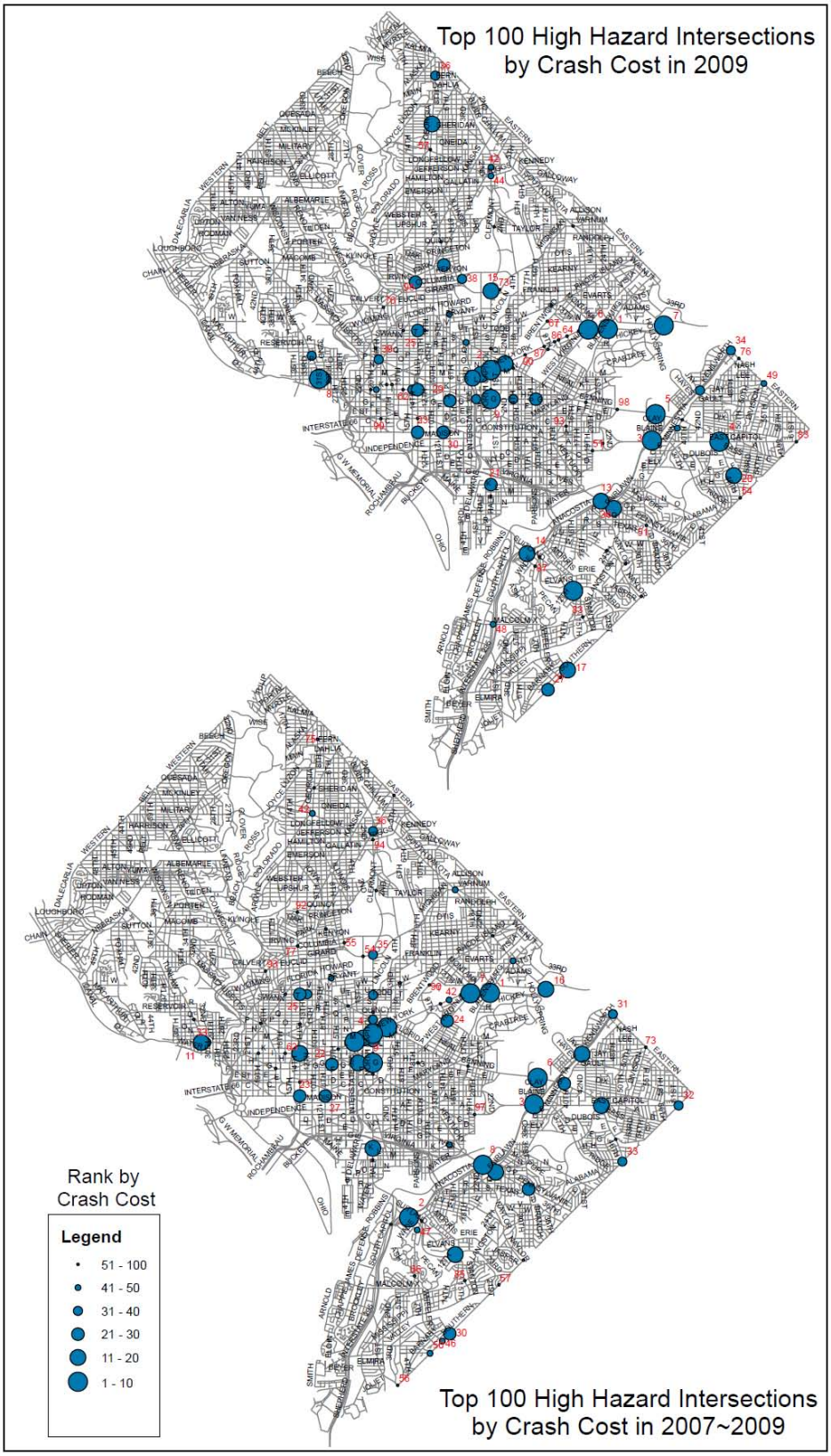

Figure 6.3 Top 100 High Hazard Intersections by Crash Cost

6.1.4 Rank by Crash Composite Index

Table 6.7 Rank by Composite Index for Each Year (Rank: 1~33)

INTERSECTION NAME	QUAD	2007		2008		2009	
		Comp. Index	Rank	Comp. Index	Rank	Comp. Index	Rank
WISCONSIN AVE AND M ST	NW	11.25	5	16	5	6.5	1
NEW YORK AVE AND BLADENSBURG RD	NE	5.25	1	4	2	7.75	2
BENNING RD AND EAST CAPITOL ST	BN	45.75	25	46	25	12	3
14TH ST AND U ST	NW	33.25	19	14	4	15	4
WISCONSIN AVE AND Q ST	NW	177.25	189	25	9	19.75	5
14TH ST AND K ST	NW	46.5	26	8.25	3	20.25	6
MONTANA AVE AND NEW YORK AVE	NE	20.25	12	27.5	13	20.5	7
STANTON RD AND SUITLAND PKWY	SE	24	14	23.25	8	21.5	8
7TH ST AND H ST	NW	11.5	6	32.25	19	22	9
NEW YORK AVE AND NORTH CAPITOL ST	BN	21	13	43.75	24	24	10
GEORGIA AVE AND PARK RD	NW	83.75	66	116	109	24	10
14TH ST AND IRVING ST	NW	180	193	85.25	66	26	12
NEW JERSEY AVE AND NEW YORK AVE	NW	24.25	15	16.25	6	28.25	13
MICHIGAN AVE AND NORTH CAPITOL ST	BN	84.25	68	119.75	116	28.25	13
FLORIDA AVE AND NEW YORK AVE	NE	67.5	48	28.75	14	28.5	15
MINNESOTA AVE AND PENNSYLVANIA AVE	SE	14.25	7	38.75	23	30	16
FIRTH STERLING AVE AND SUITLAND PKWY	SE	7.5	2	3.75	1	31	17
19TH ST AND INDEPENDENCE AVE	SE	81.5	62	122.5	121	32	18
I ST AND S CAPITOL ST	BN	19.75	11	30.75	17	33.25	19
H ST AND NORTH CAPITOL ST	BN	8.5	4	27	11	34	20
BENNING RD AND G ST	SE	79.5	60	203.5	219	37	21
BRANCH AVE AND PENNSYLVANIA AVE	SE	30	17	32.25	19	37.5	22
SOUTHERN AVE AND WHEELER RD	BN	55.75	35	49	31	38	23
KENILWORTH AVE AND BENNING RD	NE	75.25	54	46.25	27	39.75	24
8TH ST AND H ST	NE	135.25	141	148.75	157	40	25
SOUTHERN AVE AND BENNING RD	BN	14.25	7	101.75	87	42.75	26
DIVISION AVE AND SHERIFF RD	BN	109	96	81.75	61	43	27
GEORGIA AVE AND BARRY PL	NW	128	127	31.75	18	43.75	28
14TH ST AND CONSTITUTION AVE	NW	50	28	49	31	45.5	29
13TH ST AND U ST	NW	41.25	24	46	25	45.75	30
MINNESOTA AVE AND BENNING RD	NE	7.5	2	28.75	14	47	31
3RD ST AND FLORIDA AVE	NE	77	56	169.75	180	47.5	32
15TH ST AND K ST	NW	121	118	100	84	48.5	33

Table 6.7 Rank by Composite Index for Each Year (Rank: 34~66)

INTERSECTION NAME	QUAD	2007		2008		2009	
		Comp. Index	Rank	Comp. Index	Rank	Comp. Index	Rank
9TH ST AND CONSTITUTION AVE	NW	53	30	97.75	79	50.75	34
18TH ST AND ADAMS MILL RD	NW	118	112	46.5	28	51	35
EASTERN AVE AND KENILWORTH AVE	BN	39	23	154	160	51.5	36
1ST ST AND NEW YORK AVE	NW	37.75	22	62.75	40	52.75	37
M ST AND NORTH CAPITOL ST	BN	83.75	66	51.25	33	53.5	38
EASTERN AVE AND ADDISON RD	BN	104.75	92	185.75	203	54.25	39
14TH ST AND D ST	NW	55	33	68.25	47	54.5	40
21ST ST AND K ST	NW	269.75	288	123	122	56.5	41
K ST AND NORTH CAPITOL ST	BN	106.25	93	82	62	60	42
PENNSYLVANIA AVE AND ANACOSTIA FRWY	SE	54.5	32	66.25	43	60.5	43
GEORGIA AVE AND MISSOURI AVE	NW	33.25	19	120.75	118	60.75	44
NEW YORK AVE AND SOUTH DAKOTA AVE	NE	65	43	125.5	127	62	45
17TH ST AND I ST	NW	206	228	113.5	103	63.5	46
NEW HAMPSHIRE AVE AND NORTH CAPITOL ST	BN	59.75	38	68.25	47	63.75	47
14TH ST AND COLUMBIA RD	NW	275.75	298	89.75	72	63.75	47
KENILWORTH AVE AND NANNIE HELEN BURROUGHS AVE	NE	65	43	52.5	34	65.25	49
ALABAMA AVE AND GOOD HOPE RD	SE	221.25	241	239	261	65.25	49
KENILWORTH AVE AND EAST CAPITOL ST	BN	67.25	47	66.25	43	65.5	51
4TH ST AND NEW YORK AVE	NW	114	103	86.5	68	66	52
MARTIN LUTHER KING AVE AND HOWARD RD	SE	57.25	37	55	36	66.5	53
M ST AND S CAPITOL ST	BN	81.75	63	83.5	64	68.75	54
ALABAMA AVE AND STANTON RD	SE	53.75	31	124	123	69.25	55
SOUTHERN AVE AND EAST CAPITOL ST	BN	56.25	36	47.25	29	72	56
GEORGIA AVE AND PINEY BRANCH RD	NW	201.25	215	170.5	183	73.5	57
3RD ST AND H ST	NE	166.5	180	272.75	292	73.75	58
SOUTHERN AVE AND NAYLOR RD	BN	71.25	50	109.5	97	75.5	59
31ST ST AND M ST	NW	100	83	87.75	69	75.75	60
CONNECTICUT AVE AND R ST	NW	296	/	276.5	298	76	61
FLORIDA AVE AND RHODE ISLAND AVE	NW	119.25	114	82	62	76.25	62
6TH ST AND NEW YORK AVE	NW	55.25	34	118	113	77	63
2ND ST AND H ST	NW	18.5	9	29.25	16	78	64
16TH ST AND NEW HAMPSHIRE AVE	NW	116	107	113.5	103	78.25	65
14TH ST AND F ST	NW	103	88	218	234	78.75	66

Table 6.7 Rank by Composite Index for Each Year (Rank: 67~100)

INTERSECTION NAME	QUAD	2007		2008		2009	
		Comp. Index	Rank	Comp. Index	Rank	Comp. Index	Rank
13TH ST AND SOUTHERN AVE	BN	107.5	94	112	101	80.75	67
14TH ST AND RHODE ISLAND AVE	NW	132.75	132	60	37	83.5	68
7TH ST AND CONSTITUTION AVE	NW	123	122	218.5	235	83.5	68
15TH ST AND U ST	NW	213.5	236	156.75	166	85.25	70
14TH ST AND SPRING RD	NW	103	88	109.5	97	85.25	70
PENNSYLVANIA AVE AND PROUT ST	SE	237.25	259	173	190	85.5	72
MINNESOTA AVE AND NANNIE HELEN BURROUGHS AVE	NE	30.25	18	92.25	75	87.25	73
SOUTHERN AVE AND S CAPITOL ST	BN	29.5	16	60.25	39	87.75	74
16TH ST AND K ST	NW	183.75	196	70.75	54	88.5	75
WEST VIRGINIA AVE AND MOUNT OLIVET RD	NE	19.5	10	20.5	7	88.75	76
MASSACHUSETTS AVE AND DUPONT CIR	NW	115.75	106	103.25	88	89	77
20TH ST AND K ST	NW	240.5	266	136.75	141	90.5	78
19TH ST AND E ST	NW	206.75	231	197.25	213	92.5	79
4TH ST AND NEW YORK AVE	NE	167.25	182	/	/	93.25	80
BRENTWOOD RD AND W ST	NE	181.75	195	70.25	51	94	81
FIRTH STERLING AVE AND HOWARD RD	SE	91.25	74	177.5	193	94.75	82
7TH ST AND E ST	NW	173.25	187	221.25	240	94.75	82
BENNING RD AND BLADENSBURG RD	NE	72.75	52	221.5	241	95.25	84
17TH ST AND BENNING RD	NE	96.25	80	60	37	97	85
7TH ST AND PENNSYLVANIA AVE	NW	92.5	77	252.5	276	97.5	86
14TH ST AND MONROE ST	NW	274.75	295	180.75	195	97.75	87
ALABAMA AVE AND NAYLOR RD	SE	162.25	176	204.5	220	97.75	87
SOUTH DAKOTA AVE AND BLADENSBURG RD	NE	34.75	21	95.5	76	98	89
14TH ST AND C ST	NE	122.25	119	126.5	129	98.25	90
MICHIGAN AVE AND SOUTH DAKOTA AVE	NE	99.5	82	100.25	85	98.5	91
IRVING ST AND PARK PL	NW	277.75	/	80	60	98.5	91
CONNECTICUT AVE AND L ST	NW	285	/	170.75	184	99.75	93
NEW YORK AVE AND KENDALL ST	NE	132.75	132	104.25	89	101.5	94
PORTLAND ST AND S CAPITOL ST	BN	319	/	142.25	148	101.75	95
16TH ST AND IRVING ST	NW	251.75	277	98.75	82	104.5	96
9TH ST AND F ST	NW	181.5	194	254	278	105.75	97
BRENTWOOD PKWY AND MOUNT OLIVET RD	NE	205.25	224	184.5	202	106	98
NEW YORK AVE AND FENWICK ST	NE	120	116	92	74	107.25	99
27TH ST AND PENNSYLVANIA AVE	SE	155	165	149.75	159	108.75	100

Table 6.8 Rank by Composite Index for Three Years (Rank: 1~33)

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Comp. Index	Rank	Comp. Index	Rank
NEW YORK AVE AND BLADENSBURG RD	NE	4.75	2	5	1
FIRTH STERLING AVE AND SUITLAND PKWY	SE	3.75	1	7.25	2
WISCONSIN AVE AND M ST	NW	11.75	4	7.5	3
7TH ST AND H ST	NW	16.75	9	15.5	4
14TH ST AND U ST	NW	13.75	5	16	5
H ST AND NORTH CAPITOL ST	BN	11.25	3	16.5	6
14TH ST AND K ST	NW	20.75	10	18	7
MINNESOTA AVE AND BENNING RD	NE	14.75	6	19.5	8
NEW JERSEY AVE AND NEW YORK AVE	NW	14.75	6	19.75	9
STANTON RD AND SUITLAND PKWY	SE	15	8	20.75	10
MONTANA AVE AND NEW YORK AVE	NE	21.75	11	21.25	11
MINNESOTA AVE AND PENNSYLVANIA AVE	SE	28.25	16	22.75	12
BENNING RD AND EAST CAPITOL ST	BN	40.5	26	25	13
WEST VIRGINIA AVE AND MOUNT OLIVET RD	NE	25.5	13	25.75	14
NEW YORK AVE AND NORTH CAPITOL ST	BN	28.75	17	26.25	15
I ST AND S CAPITOL ST	BN	26	15	26.25	15
BRANCH AVE AND PENNSYLVANIA AVE	SE	23.5	12	27.25	17
SOUTHERN AVE AND BENNING RD	BN	32.75	19	29	18
FLORIDA AVE AND NEW YORK AVE	NE	30.25	18	33.5	19
2ND ST AND H ST	NW	25.5	13	33.5	19
13TH ST AND U ST	NW	36.75	22	35.5	21
SOUTHERN AVE AND WHEELER RD	BN	43	27	38.5	22
WISCONSIN AVE AND Q ST	NW	89	68	40	23
14TH ST AND CONSTITUTION AVE	NW	37.25	24	43.75	24
GEORGIA AVE AND BARRY PL	NW	53	33	45.5	25
MINNESOTA AVE AND NANNIE HELEN BURROUGHS AVE	NE	35.25	20	46	26
SOUTHERN AVE AND S CAPITOL ST	BN	36.75	22	46.25	27
SOUTHERN AVE AND EAST CAPITOL ST	BN	43.25	28	47.5	28
1ST ST AND NEW YORK AVE	NW	52.5	32	48	29
GEORGIA AVE AND PARK RD	NW	89.25	69	49.25	30
GEORGIA AVE AND MISSOURI AVE	NW	35.5	21	50	31
14TH ST AND D ST	NW	45.5	29	52	32
MARTIN LUTHER KING AVE AND HOWARD RD	SE	61	41	52.5	33

Table 6.8 Rank by Composite Index for Three Years (Rank: 34~66)

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Comp. Index	Rank	Comp. Index	Rank
KENILWORTH AVE AND BENNING RD	NE	47	30	52.75	34
M ST AND NORTH CAPITOL ST	BN	65.5	45	53.75	35
SOUTH DAKOTA AVE AND BLADENSBURG RD	NE	53.5	35	54.25	36
9TH ST AND CONSTITUTION AVE	NW	94	77	56.25	37
MICHIGAN AVE AND NORTH CAPITOL ST	BN	87.5	66	57.25	38
NEW HAMPSHIRE AVE AND NORTH CAPITOL ST	BN	56.25	39	57.25	38
DIVISION AVE AND SHERIFF RD	BN	95.25	81	60.25	40
18TH ST AND ADAMS MILL RD	NW	39	25	61.25	41
EASTERN AVE AND KENILWORTH AVE	BN	54.25	37	61.75	42
MASSACHUSETTS AVE AND NORTH CAPITOL ST	BN	70.5	49	62.5	43
19TH ST AND INDEPENDENCE AVE	SE	76.5	55	62.75	44
PENNSYLVANIA AVE AND ANACOSTIA FRWY	SE	68.25	48	63.25	45
KENILWORTH AVE AND NANNIE HELEN BURROUGHS AVE	NE	67	47	63.25	45
14TH ST AND IRVING ST	NW	113.25	101	64.75	47
14TH ST AND P ST	NW	53.75	36	65	48
KENILWORTH AVE AND EAST CAPITOL ST	BN	76.5	55	66	49
6TH ST AND NEW YORK AVE	NW	63	42	67	50
ALABAMA AVE AND STANTON RD	SE	88.5	67	67.5	51
1ST ST AND MICHIGAN AVE	NW	58	40	68.5	52
M ST AND S CAPITOL ST	BN	54.5	38	73.25	53
BENNING RD AND G ST	SE	121.5	109	73.5	54
NEW YORK AVE AND SOUTH DAKOTA AVE	NE	75.5	54	73.75	55
3RD ST AND FLORIDA AVE	NE	128.25	119	75	56
K ST AND NORTH CAPITOL ST	BN	70.75	50	75.75	57
15TH ST AND K ST	NW	81.75	59	76.25	58
RHODE ISLAND AVE AND SOUTH DAKOTA AVE	NE	65.25	44	76.25	58
FLORIDA AVE AND NORTH CAPITOL ST	BN	53.25	34	76.75	60
SOUTHERN AVE AND NAYLOR RD	BN	112.5	99	77.75	61
17TH ST AND BENNING RD	NE	95	79	78.25	62
8TH ST AND H ST	NE	97.25	84	79.25	63
14TH ST AND I ST	NW	107	95	79.25	63
4TH ST AND NEW YORK AVE	NW	90	70	79.5	65
1ST ST AND NEW YORK AVE	NE	73.5	52	81.5	66

Table 6.8 Rank by Composite Index for Three Years (Rank: 67~100)

INTERSECTION NAME	QUAD	2006~2008		2007~2009	
		Comp. Index	Rank	Comp. Index	Rank
14TH ST AND RHODE ISLAND AVE	NW	83.5	63	82	67
31ST ST AND M ST	NW	96.75	82	82.5	68
FLORIDA AVE AND RHODE ISLAND AVE	NW	111.75	98	82.75	69
4TH ST AND RHODE ISLAND AVE	NE	65.75	46	83	70
MICHIGAN AVE AND SOUTH DAKOTA AVE	NE	93.25	74	86.5	71
14TH ST AND SPRING RD	NW	85.75	65	87.5	72
13TH ST AND SOUTHERN AVE	BN	95	79	89.25	73
3RD ST AND NEW YORK AVE	NW	93.5	75	89.5	74
EASTERN AVE AND ADDISON RD	BN	122	110	90	75
16TH ST AND NEW HAMPSHIRE AVE	NW	84	64	90.5	76
17TH ST AND PENNSYLVANIA AVE	NW	102.5	91	93.5	77
RHODE ISLAND AVE AND NORTH CAPITOL ST	BN	76.5	55	94.25	78
16TH ST AND K ST	NW	112.75	100	96	79
NEW YORK AVE AND FENWICK ST	NE	98.75	87	96	79
MASSACHUSETTS AVE AND DUPONT CIR	NW	115.5	102	96.25	81
19TH ST AND M ST	NW	122.25	111	96.5	82
14TH ST AND L ST	NW	91.25	72	100.75	83
BRENTWOOD RD AND W ST	NE	117	105	102.25	84
17TH ST AND I ST	NW	135	127	103.25	85
NEBRASKA AVE AND WARD CIR	NW	108.75	96	104	86
9TH ST AND PENNSYLVANIA AVE	NW	83	60	106.75	87
NEW YORK AVE AND KENDALL ST	NE	150	147	107.25	88
PENNSYLVANIA AVE AND POTOMAC AVE	SE	117.25	107	107.75	89
CONNECTICUT AVE AND PORTER ST	NW	74.5	53	108.75	90
14TH ST AND C ST	NE	93.5	75	109	91
FIRTH STERLING AVE AND HOWARD RD	SE	136.25	128	110.25	92
14TH ST AND COLUMBIA RD	NW	166.75	170	111.5	93
BENNING RD AND BLADENSBURG RD	NE	65	43	112.25	94
15TH ST AND I ST	NW	83.25	62	113.75	95
21ST ST AND K ST	NW	180	188	114.5	96
14TH ST AND F ST	NW	190.75	200	114.5	96
17TH ST AND K ST	NW	96.75	82	116.75	98
12TH ST AND RHODE ISLAND AVE	NE	131	123	117.75	99
16TH ST AND NEW YORK AVE	NE	116.75	103	118	100

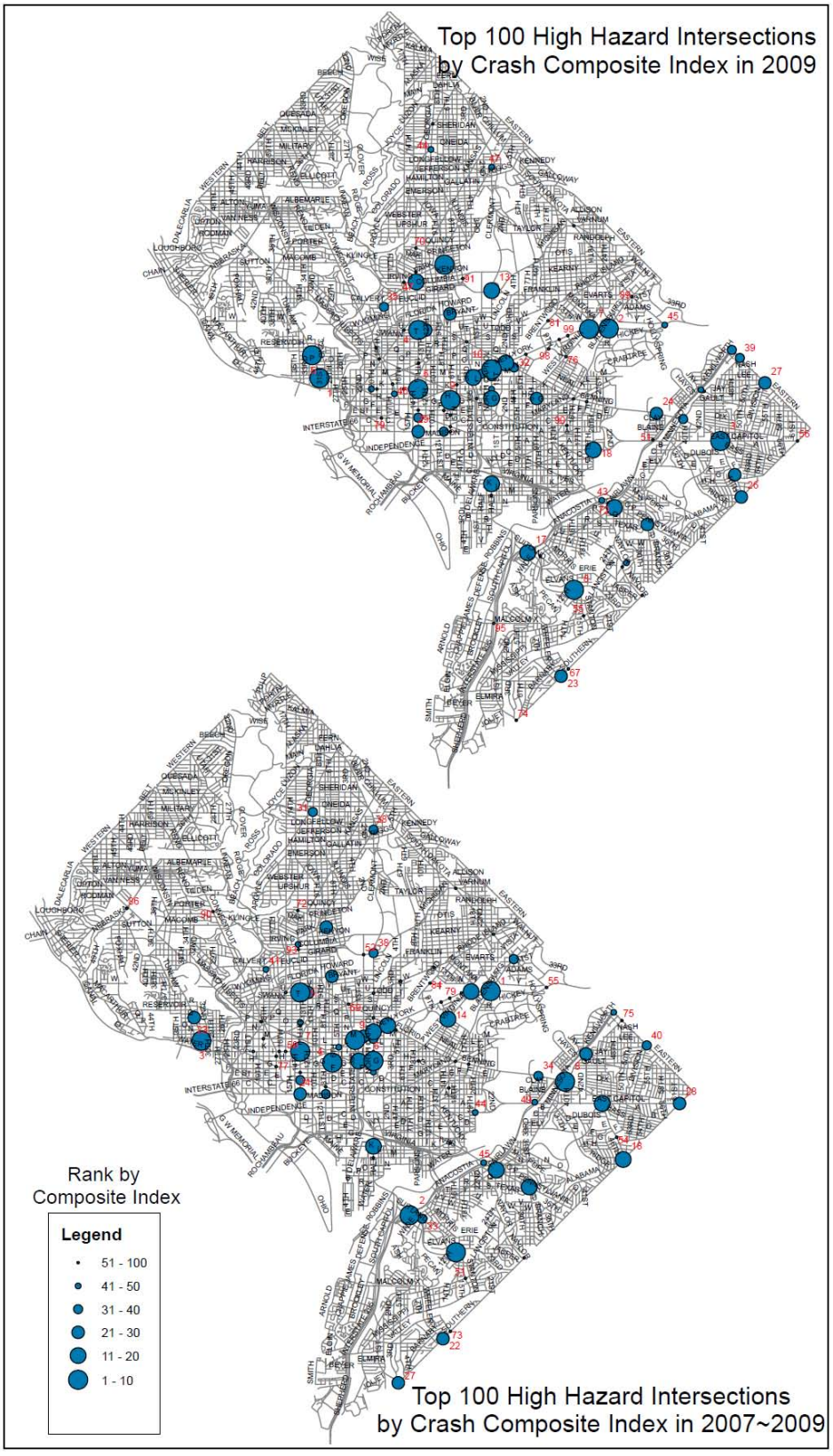

Figure 6.4 Top 100 High Hazard Intersections by Crash Composite Index

6.1.5 Rank by Crash Trend with Delta Change

Table 6.9 Rank by Crash Trend with Delta Change (Rank: 1~33)

INTERSECTION NAME	QUAD	2007 Crash	2008 Crash	2009 Crash	Delta	Rank
KENILWORTH AVE AND BENNING RD	NE	27	49	54	13.5	1
WISCONSIN AVE AND Q ST	NW	12	34	38	13	2
PORTLAND ST AND S CAPITOL ST	BN	0	16	22	11	3
14TH ST AND COLUMBIA RD	NW	6	20	26	10	4
PENNSYLVANIA AVE AND PROUT ST	SE	11	11	30	9.5	5
21ST ST AND K ST	NW	8	14	27	9.5	5
14TH ST AND INDEPENDENCE AVE	SW	0	14	19	9.5	5
14TH ST AND K ST	NW	28	48	46	9	8
FLORIDA AVE AND NEW YORK AVE	NE	28	41	46	9	8
14TH ST AND IRVING ST	NW	12	17	30	9	8
7TH ST AND PENNSYLVANIA AVE	SE	0	6	18	9	8
17TH ST AND I ST	NW	10	18	27	8.5	12
BENNING RD AND EAST CAPITOL ST	BN	30	30	44	7	13
MICHIGAN AVE AND NORTH CAPITOL ST	BN	21	18	35	7	13
16TH ST AND IRVING ST	NW	9	16	23	7	13
14TH ST AND MONROE ST	NW	5	13	19	7	13
14TH ST AND R ST	NW	3	7	17	7	13
8TH ST AND E ST	SE	0	8	14	7	13
GOOD HOPE RD AND NAYLOR RD	SE	0	3	14	7	13
14TH ST AND U ST	NW	30	43	43	6.5	20
COLUMBIA RD AND ONTARIO RD	NW	6	19	19	6.5	20
CONNECTICUT AVE AND L ST	NW	6	15	19	6.5	20
CONNECTICUT AVE AND R ST	NW	5	8	18	6.5	20
12TH ST AND MASSACHUSETTS AVE	NW	2	11	15	6.5	20
19TH ST AND INDEPENDENCE AVE	SE	18	16	30	6	25
3RD ST AND PENNSYLVANIA AVE	SE	0	5	12	6	25
9TH ST AND K ST	NW	0	2	12	6	25
1ST ST AND IRVING ST	NW	0	0	12	6	25
CONNECTICUT AVE AND FORT DAVIS DR	NW	0	0	12	6	25
18TH ST AND ADAMS MILL RD	NW	18	26	29	5.5	30
15TH ST AND K ST	NW	15	17	26	5.5	30
3RD ST AND FLORIDA AVE	NE	15	14	26	5.5	30
GEORGIA AVE AND BARRY PL	NW	10	23	21	5.5	30

Table 6.9 Rank by Crash Trend with Delta Change (Rank: 34~66)

INTERSECTION NAME	QUAD	2007 Crash	2008 Crash	2009 Crash	Delta	Rank
8TH ST AND H ST	NE	11	15	22	5.5	30
MARTIN LUTHER KING AVE AND PORTLAND ST	SE	0	16	11	5.5	30
15TH ST AND PENNSYLVANIA AVE	SE	0	7	11	5.5	30
18TH ST AND E ST	NW	0	0	11	5.5	30
23RD ST AND WASHINGTON CIR	NW	13	18	23	5	38
15TH ST AND U ST	NW	10	12	20	5	38
ALABAMA AVE AND GOOD HOPE RD	SE	8	8	18	5	38
7TH ST AND INDEPENDENCE AVE	SW	1	20	11	5	38
CONNECTICUT AVE AND FLORIDA AVE	NW	6	6	16	5	38
GEORGIA AVE AND HARVARD ST	NW	4	8	14	5	38
3RD ST AND INDEPENDENCE AVE	SW	1	10	11	5	38
CONNECTICUT AVE AND DE SALES ST	NW	4	2	14	5	38
CONSTITUTION AVE AND PENNSYLVANIA AVE	NW	0	1	10	5	38
49TH ST AND EAST CAPITOL ST	BN	0	1	10	5	38
K ST AND NORTH CAPITOL ST	BN	19	23	28	4.5	48
GEORGIA AVE AND V ST	NW	7	13	16	4.5	48
19TH ST AND E ST	NW	9	9	18	4.5	48
4TH ST AND NEW YORK AVE	NE	13	0	22	4.5	48
MINNESOTA AVE AND CLAY PL	NE	8	7	17	4.5	48
6TH ST AND FLORIDA AVE	NW	3	12	12	4.5	48
24TH ST AND CONNECTICUT AVE	NW	5	5	14	4.5	48
SHERMAN AVE AND IRVING ST	NW	5	5	14	4.5	48
28TH ST AND PENNSYLVANIA AVE	SE	0	15	9	4.5	48
6TH ST AND PENNSYLVANIA AVE	SE	0	14	9	4.5	48
12TH ST AND INDEPENDENCE AVE	SW	2	9	11	4.5	48
19TH ST AND I ST	NW	2	9	11	4.5	48
25TH ST AND ALABAMA AVE	SE	3	7	12	4.5	48
27TH ST AND K ST	NW	1	9	10	4.5	48
10TH ST AND INDEPENDENCE AVE	SE	0	4	9	4.5	48
14TH ST AND D ST	NW	20	24	28	4	63
NEW YORK AVE AND KENDALL ST	NE	20	23	28	4	63
GEORGIA AVE AND PARK RD	NW	19	17	27	4	63
SOUTHERN AVE AND WHEELER RD	BN	18	18	26	4	63

Table 6.9 Rank by Crash Trend with Delta Change (Rank: 67~100)

INTERSECTION NAME	QUAD	2007 Crash	2008 Crash	2009 Crash	Delta	Rank
4TH ST AND NEW YORK AVE	NW	16	20	24	4	63
EASTERN AVE AND ADDISON RD	BN	15	12	23	4	63
13TH ST AND GOOD HOPE RD	SE	8	22	16	4	63
2ND ST AND MASSACHUSETTS AVE	NW	8	18	16	4	63
SARATOGA AVE AND BRENTWOOD RD	NE	9	15	17	4	63
7TH ST AND K ST	NW	6	12	14	4	63
DUPONT CIR AND P ST	NW	6	11	14	4	63
GEORGIA AVE AND UPSHUR ST	NW	3	13	11	4	63
26TH ST AND PENNSYLVANIA AVE	NW	5	6	13	4	63
16TH ST AND I ST	NW	5	6	13	4	63
ALABAMA AVE AND GAINESVILLE ST	SE	3	9	11	4	63
22ND ST AND K ST	NW	3	6	11	4	63
13TH ST AND NEW YORK AVE	NW	4	4	12	4	63
19TH ST AND MASSACHUSETTS AVE	SE	3	4	11	4	63
4TH ST AND M ST	SW	0	10	8	4	63
11TH ST AND E ST	SE	0	9	8	4	63
13TH ST AND IRVING ST	NW	2	3	10	4	63
BENNING RD AND H ST	SE	0	5	8	4	63
CONNECTICUT AVE AND OLIVER ST	NW	1	0	9	4	63
FLORIDA AVE AND R ST	NW	0	0	8	4	63
13TH ST AND U ST	NW	24	24	31	3.5	87
M ST AND NORTH CAPITOL ST	BN	23	25	30	3.5	87
13TH ST AND SOUTHERN AVE	BN	19	19	26	3.5	87
NEW YORK AVE AND FENWICK ST	NE	17	22	24	3.5	87
DIVISION AVE AND SHERIFF RD	BN	16	15	23	3.5	87
16TH ST AND NEW HAMPSHIRE AVE	NW	13	19	20	3.5	87
N ST AND S CAPITOL ST	BN	13	12	20	3.5	87
18TH ST AND BELMONT RD	NW	10	16	17	3.5	87
14TH ST AND SPRING RD	NW	9	16	16	3.5	87
20TH ST AND K ST	NW	10	12	17	3.5	87
9TH ST AND NEW YORK AVE	NE	8	15	15	3.5	87
GEORGIA AVE AND IRVING ST	NW	8	13	15	3.5	87
GEORGIA AVE AND PEABODY ST	NW	10	9	17	3.5	87
BRENTWOOD PKWY AND MOUNT OLIVET RD	NE	7	11	14	3.5	87

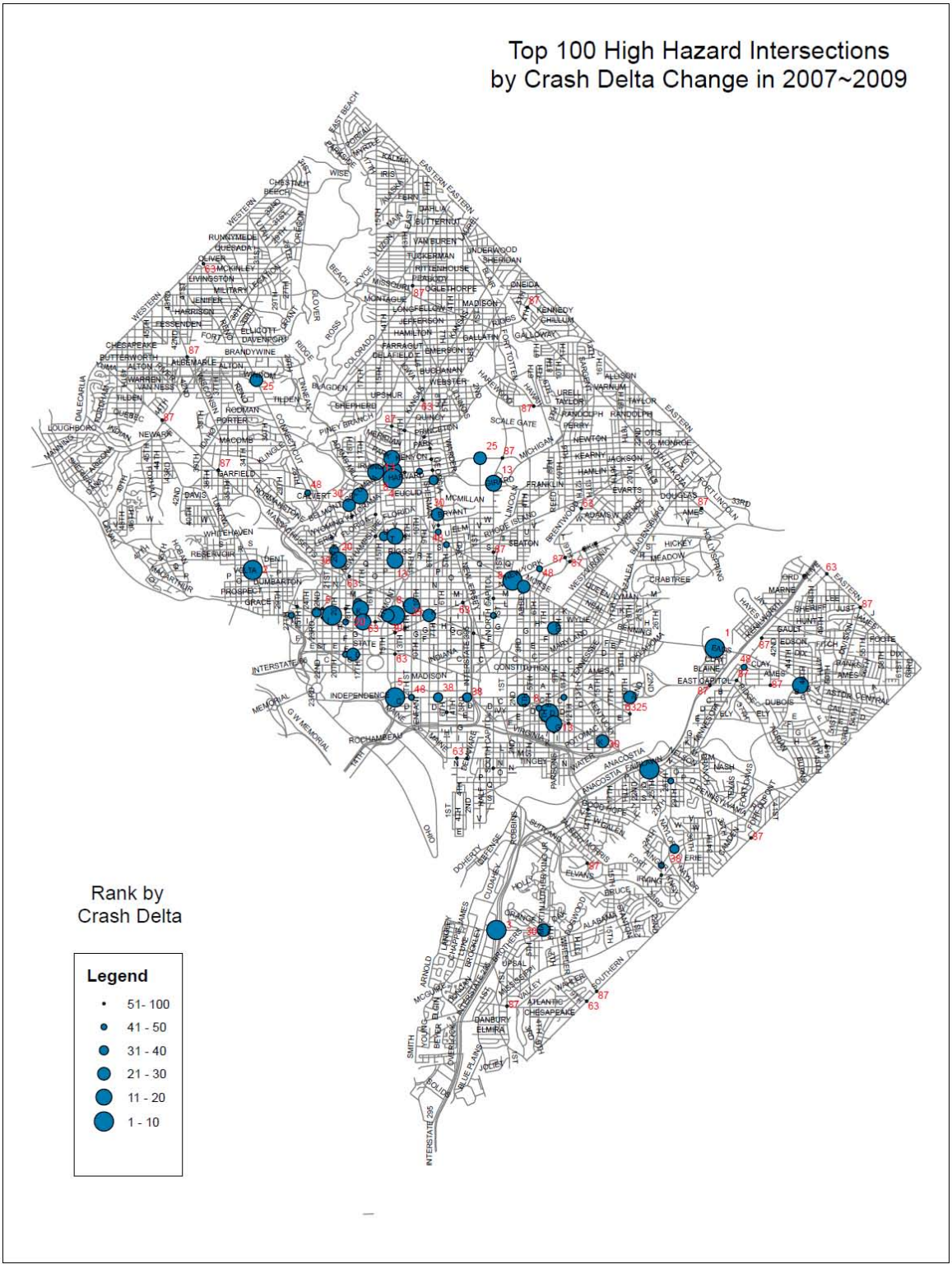

Figure 6.5 Top 100 High Hazard Intersections by Crash Delta Change

6.2 New PD10 Form and Coding Sheet

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TRAFFIC CRASH REPORT

Metropolitan Police Department, Washington, DC

189 (Type of Crash) ☐☐

190 (Road Surface) ☐☐

191 (Road Type) ☐☐

192 (Road Condition) ☐☐

193 (Street Lighting) ☐☐

194 (Light Condition) ☐☐

195 (Weather) ☐☐

196 (Traffic Condition) ☐☐

197 (Roadway Type) ☐☐

198 (Traffic Controls) ☐☐

199 (Pedestrian Action) ☐☐

200a-h (Sequence) ☐☐ ☐☐ ☐☐ ☐☐ ☐☐ ☐☐ ☐☐ ☐☐

Record N/A in any field that does not apply to this event. For yes/no questions, circle one.

All dates should be formatted as mm/dd/yyyy

Explain any "other" responses in narrative.

1 Date of Crash	2 Time of Crash (Use military)	3 Day of Week	4 Date of Report	5 Complaint Number (CCN) ☐☐☐☐☐☐☐☐	6 UCC Number

7 Type of Crash (Check all that apply)
☐ 01 Fatality ☐ 02 Injury ☐ 03 Property Damage Only ☐ 04 Hit & Run
☐ 05 Pedestrian ☐ 06 D.C. Prop. ☐ 07 Non-Collision ☐ 08 Comm. Veh.
☐ 99 Other

8 Location (Street/bridge/tunnel name & quadrant) | 9 District | 10 PSA

Enter the number of feet, in whatever direction, from the nearest intersection or block (0 feet if at an exact location). On freeways, enter the number of feet from the nearest mile post or PEPCO pole no., etc. Indicate if accident occurred on exit ramp, bridge, tunnel or other. Finally, circle the city quadrant.

11 Location Type and Name _____ Feet N S E W from Intersection/Block: _____ Freeway Mile Post: _____

PEPCO Pole No: _____ Exit Ramp: _____ Bridge: _____ Tunnel: _____

Other: _____ Circle Quadrant: NW SW NE SE

12 Construction Zone? Y N	13 On-Street Location ☐ 01 At Intersection ☐ 02 Within 100' of Intersection ☐ 03 Not at Intersection ☐ 04 Private Property ☐ 97 N/A ☐ 99 Other: _____	14 Off-Street Location ☐ 01 Public Space ☐ 02 Private Property ☐ 97 N/A ☐ 99 Other: _____	15 Report taken on scene? Y N

16 Photos taken? Y N	16a If yes, # photos	17 # Vehicles Involved	18 # Injured Persons	19a-d # Occupants (Incl. driver) Vehicle # 1 _____ 2 _____ 3 _____ 4 _____	20 # Fatalities

STRIKING OBJECT (TYPE, CONTACT INFO, INSURANCE, ETC.)

21 OBJECT TYPE *(Describe fixed object and damage in narrative)*
☐ 01 Driver ☐ 02 Pedestrian ☐ 03 Bicyclist ☐ 04 Parked Car ☐ 05 Animal
☐ 06 Other Fixed Object ☐ 97 N/A ☐ 99 Other: _____

22 Last Name First Middle	23 Sex	24 DOB

25 Street Address	26 City, State, Zip

27 Home/Cell Number	28 Work Number

29 License Number	30 State	31 Class	32 Ins Exp Date

33 Driver's Insurance Co. Name	34 Policy #

35 Make	36 Model	37 Year	38 Body	39 Color

40 Vehicle ID Number (VIN)

41 Tag Number	42 State	43 Year

44 Owner's Last Name First Middle ☐ Same as Operator Info *(skip to next section)*	45 Owner Notified? Y N

46 Owner's Street Address	47 City, State, Zip

48 Owner's Telephone #	49 Veh. Insurance Co. (if different from #33)

VEHICLE #2 (TYPE, CONTACT INFO, INSURANCE, ETC.)

50 OBJECT TYPE *(Describe fixed object and damage in narrative)*
☐ 01 Driver ☐ 02 Pedestrian ☐ 03 Bicyclist ☐ 04 Parked Car ☐ 05 Animal
☐ 06 Other Fixed Object ☐ 97 N/A ☐ 99 Other: _____

51 Last Name First Middle	52 Sex	53 DOB

54 Street Address	55 City, State, Zip

56 Home/Cell Number	57 Work Number

58 License Number	59 State	60 Class	61 Ins Exp Date

62 Insurance Co. Name	63 Policy #

64 Make	65 Model	66 Year	67 Body	68 Color

69 Vehicle ID Number (VIN)

70 Tag Number	71 State	72 Year

73 Owner's Last Name First Middle ☐ Same as Operator Info *(skip to next section)*	74 Owner Notified? Y N

75 Owner's Street Address	76 City, State, Zip

77 Owner's Telephone #	78 Veh. Insurance Co. (if different from #62)

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PD 10 Rev. December 2008 **TRAFFIC CRASH REPORT** Metropolitan Police Department, Washington, DC

200h-p (Sequence)

VEHICLE #3 (TYPE, CONTACT INFO, INSURANCE, ETC.)

79 OBJECT TYPE *(Describe fixed object and damage in narrative)*
❑ 01 Driver ❑ 02 Pedestrian ❑ 03 Bicyclist ❑ 04 Parked Car ❑ 05 Animal
❑ 06 Other Fixed Object ❑ 97 N/A ❑ 99 Other: _____

80 Last Name | First | Middle | 81 Sex | 82 DOB

83 Street Address | 84 City, State, Zip

85 Home/Cell Number | 86 Work Number

87 License Number | 88 State | 89 Class | 90 Ins Exp Date

201a-c (Seat Location Code)

91 Driver's Insurance Co. Name | 92 Policy #

93 Make | 94 Model | 95 Year | 96 Body | 97 Color

98 Vehicle ID Number (VIN)

202a-c (Seat Belt Code)

99 Tag Number | 100 State | 101 Year

102 Owner's Last Name | First | Middle
❑ Same as Operator Info *(skip to next section)*
103 Owner Notified? Y N

203a-c (Air Bag Code)

104 Owner's Street Address | 105 City, State, Zip

106 Owner's Telephone # | 107 Veh. Insurance Co. (if different from #33)

VEHICLE #4 (TYPE, CONTACT INFO, INSURANCE, ETC.)

108 OBJECT TYPE *(Describe fixed object and damage in narrative)*
❑ 01 Driver ❑ 02 Pedestrian ❑ 03 Bicyclist ❑ 04 Parked Car ❑ 05 Animal
❑ 06 Other Fixed Object ❑ 97 N/A ❑ 99 Other: _____

109 Last Name | First | Middle | 110 Sex | 111 DOB

112 Street Address | 113 City, State, Zip

114 Home/Cell Number | 115 Work Number

116 License Number | 117 State | 118 Class | 119 Ins Exp Date

120 Insurance Co. Name | 121 Policy #

122 Make | 123 Model | 124 Year | 125 Body | 126 Color

127 Vehicle ID Number (VIN)

128 Tag Number | 129 State | 130 Year

131 Owner's Last Name | First | Middle
❑ Same as Operator Info *(skip to next section)*
132 Owner Notified? Y N

133 Owner's Street Address | 134 City, State, Zip

135 Owner's Telephone # | 136 Veh. Insurance Co. (if different from #62)

INVOLVED PERSONS: *In the next section, include all operators, passengers and pedestrians involved even if not injured.*

204a-c (Ejection Code)

	137a-c Assoc. w/vehicle #	138a-c Last Name, First Name	139a-c Street Address, City, State, Zip	140a-c Home/Cell/ Work #	141a-c Sex	142a-e Age	143a-c Empl. by DC Govt?	144a-c Taken to Hosp?
1							Y N	Y N
2							Y N	Y N
3							Y N	Y N

INJURED PERSONS

205a-c (Injury Code)

	145a-c Last Name, First Name	146a-c Where Taken (Hospital)	147a-c By Whom (Last Name, First Name)	148a-c Major Crash Notified?	149a-c Teletype Notified?	150a-c Relative Notified? (If Yes, Last & First Name & Relationship)	151a-c Status (Admitted, Released, Unknown)
1				Y N	Y N		
2				Y N	Y N		
3				Y N	Y N		

Non-Involved Witnesses

	152a-c Last Name	First	Middle	153a-c Street Address, City, State, Zip	154a-c Telephone #
1					
2					
3					

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TRAFFIC CRASH REPORT

Metropolitan Police Department, Washington, DC

POLICE ACTION RELATING TO DRIVERS & PEDESTRIANS

	155a-c Arrest/NOI#	156a-c Primary and Secondary Charges (Report must support charges)	157a-c What Traffic Signs Were Present?
1			
2			
3			

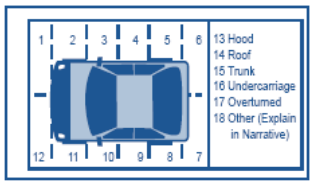
VEHICLE CONDITION

158 STRIKING OBJECT/VEHICLE #1: Direction of Travel and Street Before Crash (must match narrative and diagram)
☐ 01 N/B ☐ 02 E/B ☐ 03 S/B ☐ 04 W/B ☐ 97 N/A ☐ 99 Other_____

159 Vehicle Disabled? Y N

160 Skid Marks
To Impact: _____
After Impact: _____
☐ N/A

161 Circle All Areas With Damage:



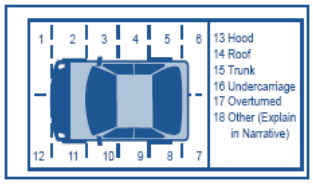
162 Vehicle Was . . .
☐ 01 Left on Scene
☐ 02 Towed By: _____
Towed to: _____
Towing Control #: _____
☐ 03 Driven Away By: _____
☐ 97 N/A ☐ 99 Other

163 VEHICLE #2: Direction of Travel and Street Before Crash (must match narrative and diagram)
☐ 01 N/B ☐ 02 E/B ☐ 03 S/B ☐ 04 W/B ☐ 97 N/A ☐ 99 Other_____

164 Vehicle Disabled? Y N

165 Skid Marks
To Impact: _____
After Impact: _____
☐ N/A

166 Circle All Areas With Damage:



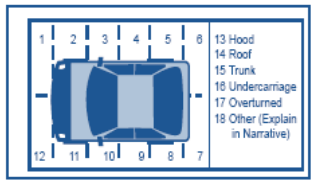
167 Vehicle Was . . .
☐ 01 Left on Scene
☐ 02 Towed By: _____
Towed to: _____
Towing Control #: _____
☐ 03 Driven Away By: _____
☐ 97 N/A ☐ 99 Other

168 VEHICLE #3: Direction of Travel and Street Before Crash (must match narrative and diagram)
☐ 01 N/B ☐ 02 E/B ☐ 03 S/B ☐ 04 W/B ☐ 97 N/A ☐ 99 Other_____

169 Vehicle Disabled? Y N

170 Skid Marks
To Impact: _____
After Impact: _____
☐ N/A

171 Circle All Areas With Damage:



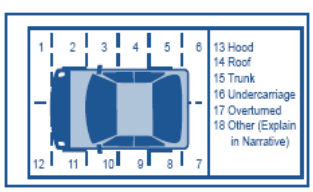
172 Vehicle Was . . .
☐ 01 Left on Scene
☐ 02 Towed By: _____
Towed to: _____
Towing Control #: _____
☐ 03 Driven Away By: _____
☐ 97 N/A ☐ 99 Other

173 VEHICLE #4: Direction of Travel and Street Before Crash (must match narrative and diagram)
☐ 01 N/B ☐ 02 E/B ☐ 03 S/B ☐ 04 W/B ☐ 97 N/A ☐ 99 Other_____

174 Vehicle Disabled? Y N

175 Skid Marks
To Impact: _____
After Impact: _____
☐ N/A

176 Circle All Areas With Damage:



177 Vehicle Was . . .
☐ 01 Left on Scene
☐ 02 Towed By: _____
Towed to: _____
Towing Control #: _____
☐ 03 Driven Away By: _____
☐ 97 N/A ☐ 99 Other

	206a-c Driver/ Pedestrian Condition	207a-c Impairment	208a-c Type of Test Conducted	209a-c Blood/ Alcohol Content
Involved Person #1				
Involved Person #1				
Involved Person #3				

	210a-d Cell Phone/Other Electronic Device Present (Y/N)?	211a-d Driver/ Pedestrian Distraction	212a-d Primary Contributing Circumstances	213a-d Driver Action	214a-d Vehicle Type: Private	215a-d Vehicle Type: Govt	216a-d Vehicle Type: Comm
Vehicle #1							
Vehicle #2							
Vehicle #3							
Vehicle #4							

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PD 10 Rev. December 2008 **TRAFFIC CRASH REPORT** Metropolitan Police Department, Washington, DC

178 Crash Diagram (Not to Scale) (The diagram must correspond to the narrative. If the report is being taken by an officer after the fact, the diagram shall be completed to show the general area in which the crash occurred. Please indicate freeway access ramps, exit ramps and bridges. Indicate type of fixed object(s), direction, posted speed and vehicles by number indicated in spaces above.)

N

179 Detailed Narrative (Give a concise statement, in your own words, of the facts that are not covered in this report, or to clarify any items that are not satisfactorily explained ("other" answers). If statements are taken, use PD 118 (Defendant/Suspect Statement) or PD 119 (Complainant/Witness Statement). If accident occurred in a construction zone, describe type of construction zone. Wherever possible, list the item number of the corresponding section.

☐ *Narrative Continued on PD 10B Supplemental*

This report is used for statistical analysis of vehicular crashes and the prevention thereof. The data given represents the opinion and conclusions of the reporting officer, based on his/her judgement after considering all the facts disclosed through his/her investigation of this crash.

180 Reporting Member's Name/CAD/Badge #	181 Unit	182 Signature	183 Official's Name/CAD/Badge #	184 Official's Unit

185 Official's Signature	186 Reviewer	187 Distribution	188 Date	Complaint Number (CCN)

Use PD 10B Supplemental for Motor Carrier Vehicle Information and additional space.

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189 Type of Crash

00 Unknown	05 Side Swiped	10 Left Turn Hit Pedestrian	15 Backing Hit Pedestrian
01 Right Angle	06 Head On	11 Right Turn Hit Pedestrian	16 Non-Collision Accident
02 Left Turn Hit Vehicle	07 Parked Vehicle	12 Straight Hit Pedestrian	17 Underride
03 Right Turn Hit Vehicle	08 Fixed Object	13 Backing Hit Moving Vehicle	18 Override
04 Rear End	09 Ran Off Roadway	14 Backing Hit Parked Vehicle	99 Other

190 Road Surface

00 Unknown	02 Asphalt	04 Gravel	99 Other
01 Concrete	03 Brick	05 Dirt	

191 Road Type (Select all that apply)

01 Straight	04 Grade	07 Ramp
02 Curve	05 Crest	08 Bridge
03 Level	06 Underpass	99 Other

192 Road Condition

00 Unknown	03 Wet	06 Snow	99 Other
01 Repairing	04 Standing Water	07 Ice	
02 Dry	05 Slush	08 Sand, Mud, Dirt, Oil or Gravel	

193 Street Lighting

00 Unknown	02 Street Lights On	98 None
01 Defective	03 Street Lights Off	99 Other

194 Light Condition

00 Unknown	03 Dark (Lighted)	05 Dawn
01 Daylight	04 Dark (Unknown Roadway	06 Dusk
02 Dark (Not Lighted)	Lighting)	99 Other

195 Weather

00 Unknown	03 Snow	05 Blowing Sand, Soil, Dirt or	98 Clear/No adverse conditions
01 Fog/Mist	04 Sleet/Hail	Snow	99 Other
02 Rain		06 Severe Crosswind	

196 Traffic Condition

00 Unknown
01 Heavy
02 Medium
03 Light
99 Other

197 Roadway Type

00 Unknown
01 Two-Way, Not Divided
02 Two-Way, Divided Unprotected Median
03 Two way, Divided Positive Median Barrier
04 One-Way, Not Divided
99 Other

198 Traffic Controls

00 Unknown
01 None
02 Flashing
03 Yield
04 Stop Sign
05 Signal
06 Officer
07 Restricted Turn
99 Other

199 Pedestrian Action

00 Unknown
01 With Signal in Crosswalk
02 Against Signal in Crosswalk
03 In Crosswalk: No Signal
04 From Between Parked Cars
05 Not in Crosswalk
06 In Unmarked Crosswalk
97 N/A
99 Other

200a-p Sequence of Vehicle Events (Record no more than 4 per vehicle and describe each in narrative)

00 Unknown
01 Non-Collision: Ran Off Road
02 Non-Collision: Jackknife
03 Non-Collision: Overturn (Rollover)
04 Non-Collision: Downhill Runaway
05 Non-Collision: Cargo Loss or Shift
06 Non-Collision: Explosion or Fire
07 Non-Collision: Separation of Units
08 Non-Collision: Cross Median/Centerline
09 Non-Collision: Equipment Failure (tire, etc.)
10 Non-Collision: Other
11 Non-Collision: Unknown
12 Collision Involving Pedestrian
13 Collision Involving Motor Vehicle in Transport
14 Collision Involving Parked Motor Vehicle
15 Collision Involving Train
16 Collision Involving Pedacycle
17 Collision Involving Animal
18 Collision Involving Fixed Object
19 Collision Involving Work Zone Maintenance Equip.
20 Collision Involving Other Movable Object
21 Collision Involving Unknown Movable Object
22 Collision: Hit & Run
23 Collision Involving Moving Motor Vehicle
97 Not applicable, no more vehicles or event sequences for this vehicle
99 Other

201a-c Seat Location Code (Record 1 per person and describe in narrative)

01 Driver
02 Front Center Seat
03 Front Passenger Seat
04 Rear Left Seat (behind driver)
05 Rear Center Seat
06 Rear Right Seat
07 SUV/Caravan
08 Motorcycle/Moped Passenger
09 Bus occupant
10 Pedestrian
11 Bicycle Rider
97 N/A
99 Other: Skateboard, Tricycle, etc.

202a-c Seat Belt/Safety Code (Record 1 per person and describe in narrative)

00 Use Unknown	03 Belt Failed	06 Improperly Worn	99 Other
01 Not Installed	04 Fastened	07 Helmet	
02 Not Fastened	05 Child Restraint	97 N/A	

203a-c Air Bag Code (Record 1 per person and describe in narrative)

00 Unknown	02 Air Bag Deployed	04 Side-Impact Airbags	99 Other
01 Air Bag Installed	03 Air Bag Failed	97 N/A	

204a-c Ejection Code (Record 1 per person and describe in narrative)

00 Unknown	02 Total	97 N/A
01 Partial	03 None	99 Other

205a-c Injury Code (Record 1 per person and describe in narrative)

00 Unknown	03 Disabling Injury	05 Complaint of Pain, But No	99 Other
01 No Injury	04 Non-Disabling Injury	Visible Injury	
02 Fatal		97 N/A	

206a-c Driver/Pedestrian Condition (Record 1 per person and describe in narrative)

00 Unknown	02 Ill	04 Asleep	99 Other
01 Fatigued	03 Physical Defect	05 Normal	

207a-c Impairment (Record 1 per person and describe in narrative)

00 Impairment Unknown	**Had been drinking and…**	03 … Ability impaired	99 … Other
01 Had not been drinking	02 … Obviously drunk	04 … Ability not impaired	

208a-c Type of Test Conducted (Record 1 per person and describe in narrative)

00 No test Conducted	02 Blood	97 N/A
01 Urine	03 Breath	99 Other

211a-d Driver/Pedestrian Distraction (Record 1 per vehicle and describe in narrative)

00 Unknown	04 Writing	08 Using personal communication	97 N/A
01 Cell phone (hand held)	05 Personal Grooming	technologies	99 Other
02 Cell phone (hands-free)	06 Interacting w/Pets	09 Eating	
03 Reading	07 Interacting w/unsecured cargo	10 Distracted by passenger(s)	

212a-d Primary Contributing Circumstance (Record 1 per vehicle and describe in narrative)

00 Unknown	07 Right Turn on Red	14 Defective Brakes, Lights, etc.	21 Cell Phone/Other Electronic Device
01 No Violation	08 Stop Sign	15 Fail to Set Parking Brake	22 Other Distraction
02 Speed	09 Yield Sign	16 Open Door to Traffic	22 Road Defects
03 Driver Inattention	10 Red Light Violation	17 Improper Backing	99 Other
04 Following Too Close	11 Flashing/Directional Light	18 Drug/Alcohol Influence	
05 Improper Passing	12 Automobile/Pedestrian Right of Way	19 Pedestrian Violation	
06 Changing Lanes Without Cautioning	13 Wrong Way/Side of Street	20 Driver Vision Obstructed	

213a-d Driver Action (Record 1 per vehicle and describe in narrative)

00 Unknown	05 Parked	09 Ran Off Road	14 Avoiding
01 Backing	06 Entering/Leaving Parked Position	10 Changing Lanes	97 N/A
02 Turning Right	07 Making "U" Turn	11 Going Straight	99 Other
03 Turning Left	08 Merging	12 Overtaking	
04 Stopped/Standing: Traffic Lane		13 Slowing/Stopping	

214a-d Vehicle Type: Private (Record 1 per vehicle and describe in narrative)

00 Unknown	04 Bicycle	08 Pick-up Truck	99 Other
01 Passenger Auto	05 Segway	09 Recreational Vehicle	
02 Motorcycle	06 SUV	11 Scooter	
03 Moped	07 Minivan	97 N/A	

215a-d Vehicle Type: Government (Record 1 per vehicle and describe in narrative)

00 Unknown	06 SUV	11 Bus (Seats 9-15 people, incl. driver)	15 Unmarked Police Car
01 Passenger Auto	07 Minivan	12 (Bus (seats more than 15 people, incl. driver)	16 Fire Truck
02 Motorcycle	08 Pick-up Truck	13 Truck	17 Other Emergency Vehicle
03 Moped	09 Recreational Vehicle	14 Marked Police Car	97 N/A
04 Bicycle	10 Scooter		99 Other
05 Segway			

216a-d Vehicle Type: Commercial (Record 1 per vehicle and describe in narrative)

00 Unknown Heavy Truck, Unclassified, > 10,000 lb.	03 Bus (Seats 9-15 people, including driver)	06 Single-Unit Truck (3 or more axles)	11 Taxi Cab
01 Passenger Auto (only if vehicle has HM Placard)	04 Bus (seats more than	07 Truck/Trailer	15 people, including driver)
02 Light Truck (only if vehicle has HM Placard)	05 Single-Unit Truck (2 axles, 6 tires)	08 Truck/Tractor (Bobtail)	97 N/A
		09 Tractor/Semitrailer	99 Other
		10 Tractor/Double	