The Seattle Department of Transportation

TRAFFIC REPORT 2010

SDOT
Seattle Department of Transportation

Table of Contents

This report has been prepared in compliance with Seattle Municipal Code 11.16.220, which requires the City Traffic Engineer to present an annual traffic report that includes information about traffic trends and traffic collisions on city streets.

In gathering and compiling the information in this report, the Seattle Department of Transportation does not waive the limitations on this information's discoverability or admissibility under 23 U.S.C § 409.

For additional information about collisions on Seattle streets, readers may contact Brian Kemper, Acting City Traffic Engineer, at brian.kemper@seattle.gov.

Peter Hahn, Director
Seattle Department of Transportation

Brian Kemper, P.E.
Acting City Traffic Engineer
Seattle Department of Transportation

Traffic volume, speed and reported collisions are the three cardinal pieces of data that traffic engineers use to evaluate the feasibility of engineering changes to the streets.

Traffic Volume and Speed

The Seattle Department of Transportation (SDOT) collects and maintains volume data for vehicles, pedestrians and bicycles. Volume data is used to identify the highest volume arterials and create the city's traffic flow map, identify areas where pedestrian and bicycle traffic is highest, select future project locations and measure performance of traffic projects once they are installed.

SDOT has recently started collecting vehicle speed data regularly. We expect this data to be used in selecting traffic calming candidate locations, particularly where there are high concentrations of pedestrians and bicyclists.

Motor Vehicle Volume

SDOT is responsible for counting the volume of traffic on certain city arterial streets each year. Traffic counts are taken throughout the year at 20 control count locations, 164 screen line locations and 111 additional locations.

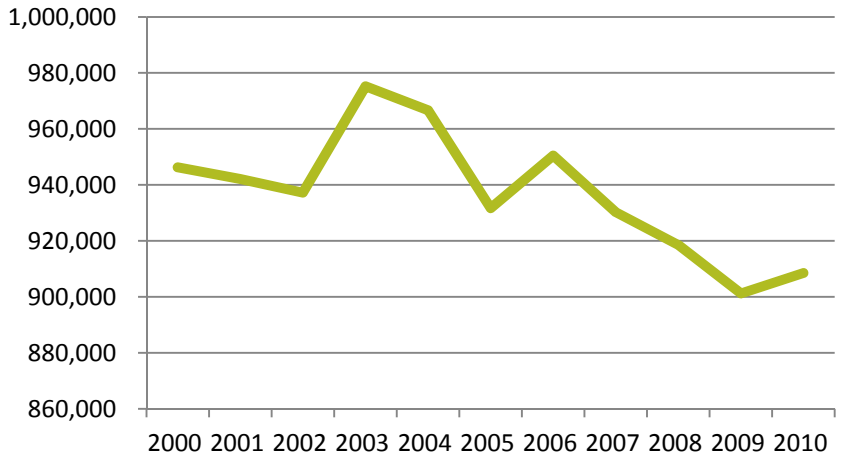
SDOT takes control counts at 20 locations every month. These counts are added together and divided by 12 to derive a monthly control factor. This factor is then applied to every count we take to correct for seasonal changes in traffic. In addition, SDOT measures vehicle volume at 164 screen line locations. These locations are identified in Seattle's Comprehensive Plan, and the counts are used to determine screen line levels of service as required by the plan. We also measure vehicle volume at 111 additional locations each year. A complete list of control, screen line and other regular count locations can be found in the appendix.

SDOT also measures volume at ad hoc locations throughout the year as needed for traffic analysis and engineering studies. For an example of how these volumes are used, please refer to Section Five – Data Use.

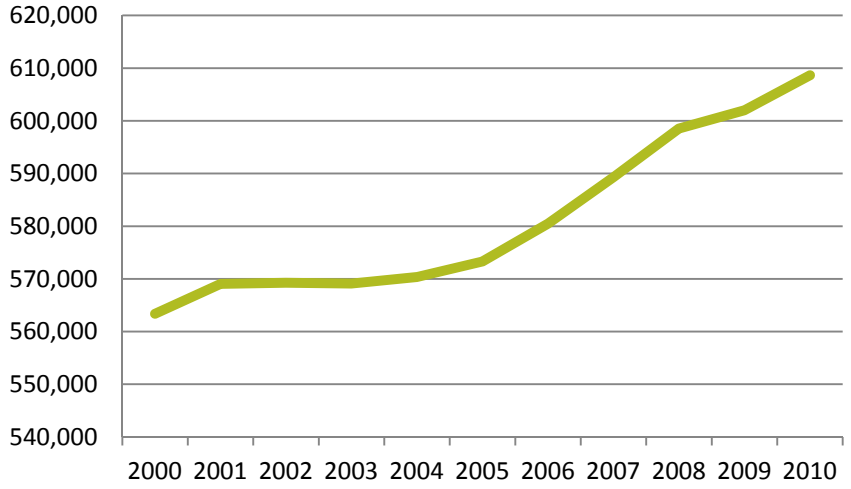
Using the annual counts taken at 19 of Seattle's bridges, SDOT derives a proxy number for citywide motor vehicle annual average daily traffic. We use these counts because driving almost anywhere in Seattle is likely to involve crossing one of the bridges. Based on this data, traffic has increased 0.86 percent since 2009, which appears to be a reversal of a steady downward trend since 2006. The graph of Seattle's annual average daily traffic (AADT) on page 2-3 shows that while volume has increased slightly over 2009 numbers, it is still trending downward from a high in 2003, despite the steadily increasing population.

SDOT is often asked whether traffic volumes correlate to gas prices, employment figures and transit ridership. At the bottom of page 2-3 are graphs showing average annual employment figures for the Seattle-Tacoma-Bellevue region, gas prices and Metro and Sound Transit ridership figures, which can be compared with graphs of Seattle's AADT and population at the top of the page.

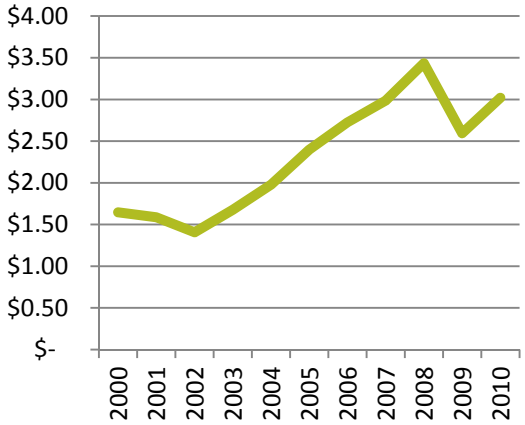
Annual Average Daily Traffic in Seattle



Seattle Population

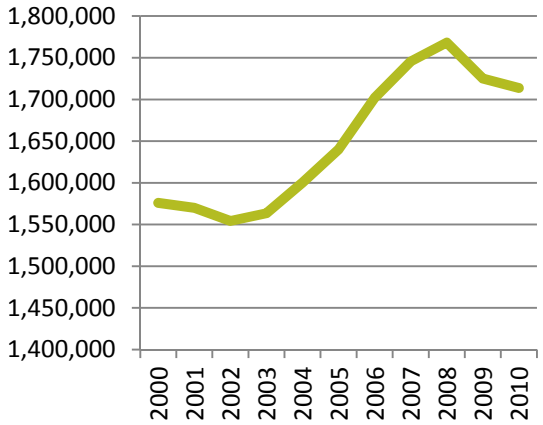


Average Annual Price of Unleaded Gas in Seattle



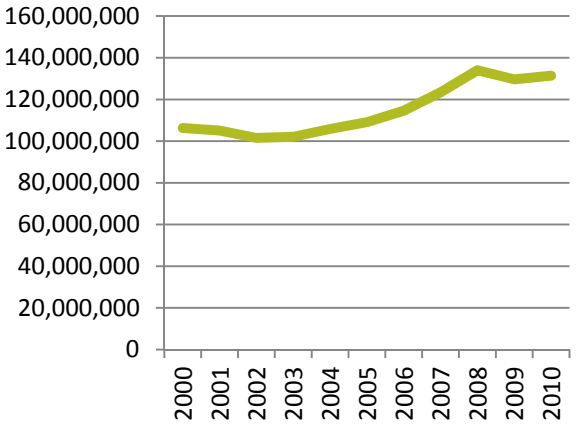
Source: Oil Price Information Service

Average Annual Employment - Seattle-Bellevue-Tacoma



Source: US Department of Labor . Bureau of Labor Statistics

Total Transit Ridership



Source: King County Metro and Sound Transit

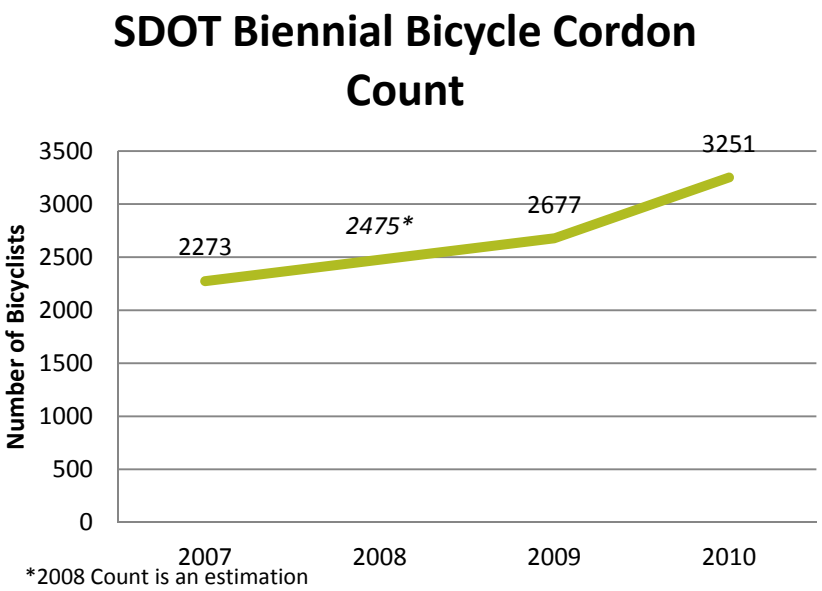
Top 10 Arterial Segments by Volume			Average Week day Traffic (AWDT)
Aurora Avenue N	south of	Harrison Street	79,200
East Marginal Way S	south of	S Alaska Street	69,300
NE 45th Street	west of	NE 45th Place	46,800
Montlake Boulevard NE	north of	NE Pacific Place	46,200
Elliott Avenue W	southeast of	W Mercer Place	45,900
Lake City Way NE	southwest of	NE 115th Street	44,400
Corson Avenue S	north of	S Michigan Street	41,700
Lake City Way NE	northeast of	NE 95th Street	39,500
Valley Street	west of	Fairview Avenue N	39,200
S Michigan Street	east of	6th Avenue S	38,600

In 2010 the top ten arterials for traffic volume include three streets that did not make the list in 2009: Corson Avenue S north of S Michigan Street, Lake City Way NE northeast of NE 95th Street and S Michigan Street east of 6th Avenue S. The increase in volume for the locations on S Michigan Street and Corson Avenue S could be due to the 2010 closure of the South Park Bridge.

Bicycle Volume

The city of Seattle counts bicycles at selected locations on one day each year. Since 2007, SDOT has counted bicycles entering downtown in odd numbered years and at locations around the city in even years. In 2010, we counted at both the downtown cordon and the citywide locations. Please see Section Seven – Future Data Collection for information on future bicycle data collection plans.

As shown in the graph, there has been substantial growth in bicycle commuting – as represented by the downtown cordon count - over the past several years. These data show a marked uptick in 2009 and a positive growth trend.



*2008 Count is an estimation

The cordon counts show that the number of bicyclists entering downtown during the morning commute has increased by 21 percent between 2009 and 2010. As recorded by volunteers at 30 locations, 3,251 bicyclists commuted into the downtown core on the day of the count in 2010. The top five locations for bicyclists to enter the Center City are, in order: Colman Dock, Dexter Avenue N, the Elliott Bay Trail, the Alaskan Way Path, and Pine Street.

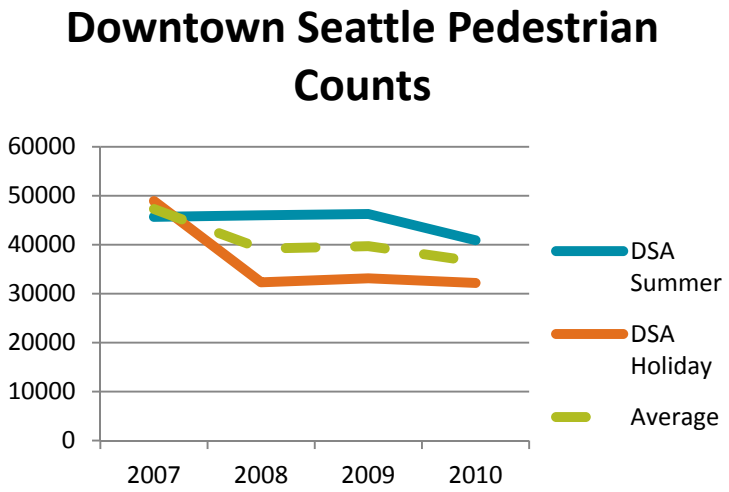
However, the citywide count showed a decline in bicycling. In 2008, the first citywide count, there were 4,666 bicyclists. In 2010, that number declined to 3,961 – a 15 percent decrease. These counts are a vital measurement tool as the city strives to reach its goal of tripling the number of bicyclists by 2017.

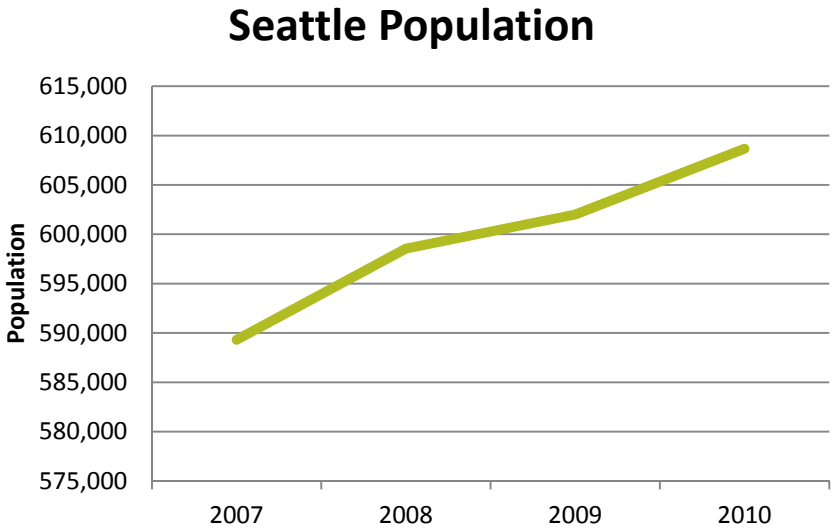
Pedestrian Volume

SDOT has less well-developed data for pedestrian volume. We measure pedestrian volume using the Downtown Seattle Association's downtown pedestrian counts, both summer and holiday season, as well as US Census figures for Seattle's population.

Since 2007, Seattle has seen an increase in population – up 7 percent. During that time, downtown Seattle has seen a decrease in pedestrian traffic.

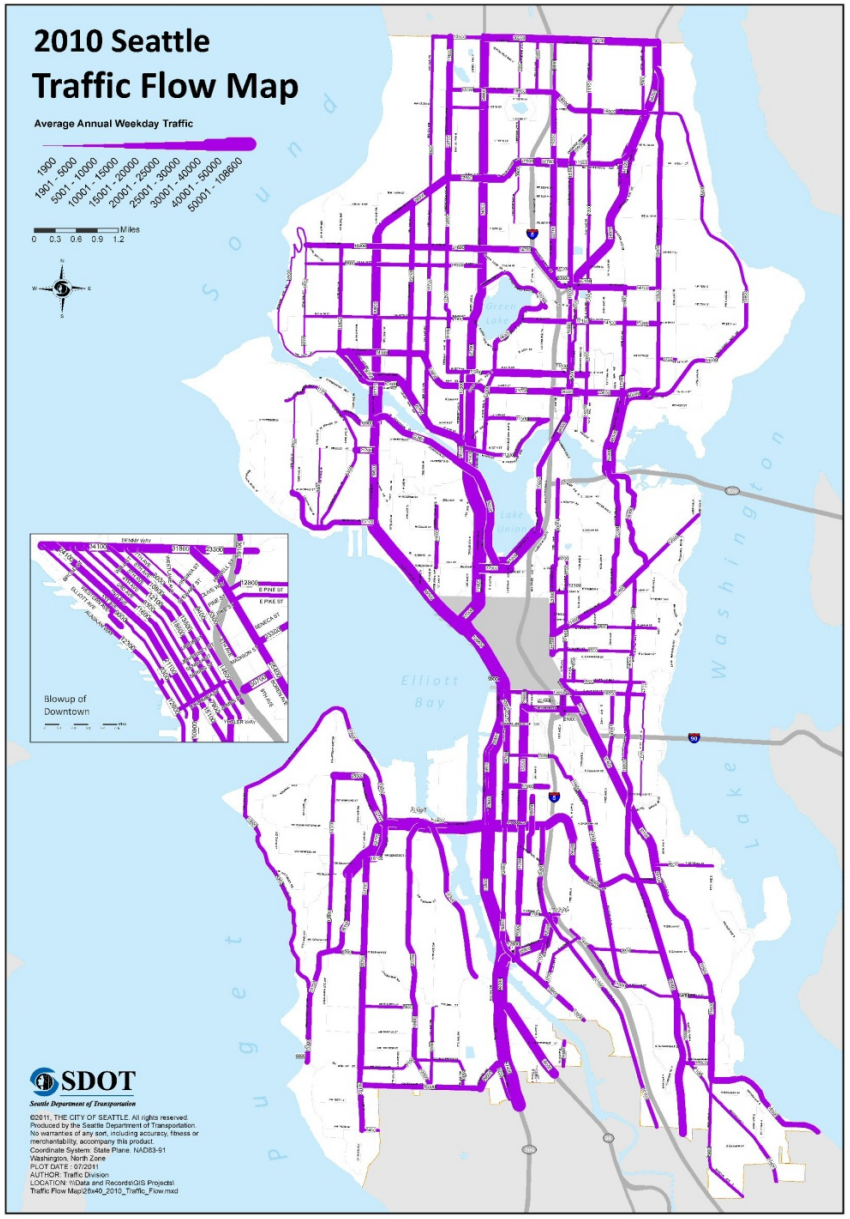
In 2011, SDOT started using the National Bicycle and Pedestrian Documentation project methodology for counting bicycles and pedestrians. These spot counts will provide consistent, annual pedestrian volumes that we can track over time.





Flow Map

One of the uses of annual vehicle counts is to create the "flow map," which uses different line weights to show relative traffic volumes on arterial streets. A copy of the 2010 Flow Map is shown. Prior to 2008, this map was drawn by hand. Starting in 2008, the map has been made electronically using data from the traffic counts database and GIS tools. The volumes on the map represent the Average Annual Weekday Traffic (AAWDT) (5-day, 24-hour) for that section of roadway. This map is also available on SDOT's website.



Motor Vehicle Speed

Until 2010, SDOT collected vehicle speed at the request of a traffic engineer for purposes of traffic safety investigations, prospective project selection and design, and for evaluation of completed projects. Engineers measure speed in a number of different ways, including: 85th percentile speed of traffic[1]; and high-end speeder percentage[2], a measure of aggressive drivers. An example of the use of the high-end speeder percentage data is in measuring a reduction in the high-speeder percentage after installing a traffic calming measure.

Starting in 2010, SDOT is collecting speed data much as we collect volume data – at specified locations each year, in addition to those ad-hoc locations that serve site-specific traffic evaluation needs. Aurora Avenue N, Stone Way N, Fauntleroy Avenue SW, 24th Avenue NW, and Rainier Avenue S are all specified in the Pedestrian Master Plan as locations to report on trends in the 85th percentile speed of traffic.

[1] The speed at or below which 85 percent of traffic travels, sometimes characterized as the speed a "reasonable" driver will choose as being safe.
[2] "High-end speeder percentage" has come to mean the percentage of drivers who exceed the posted speed limit by 10 miles per hour or more.

2010 Speed on Selected Arterials

Location	Speed limit	Direction	85th percentile speed	Direction	85th percentile speed	High-end Speeder Percentage*
Greenwood Avenue N, S/O N 145th Street	35	NB	41.8	SB	43.3	7.9%
SW Admiral Way, SE/O SW City View Street	30	NWB	40.6	SEB	42.1	25.5%
Ellis Avenue S, S/O S Warsaw Street	30	NB	40.5	SB	40.1	17.5%
Greenwood Avenue N, S/O N 100th Street	30	NB	40.3	SB	40.1	16.4%
4th Avenue S, S/O S Bennett Street	35	NB	39.9	SB	37	6.9%
35th Avenue SW, N/O SW Willow Street	35	NB	39.8	SB	40.9	3.2%
Pinehurst Way NE, NE/O NE 115th Street	30	NEB	39.7	SWB	40.9	17.7%
NE 125th Street, W/O 25 Avenue NE	35	EB	39.1	WB	39.9	5.5%
N 130th Street, W/O Ashworth Avenue N	30	EB	38.8	WB	37.7	9.7%
Delridge Way SW, N/O SW Myrtle Street	35	NB	37.9	SB	35.8	0.6%
8th Avenue S, S/O S Director Street	30	NB	36.4	SB	37.8	11.8%
8th Avenue SW, N/O SW Roxbury Street	35	NB	36.3	SB	36.3	0.7%
NE 50th Street, W/O 1st Avenue NE	30	EB	35.1	WB	37.4	5.7%
Seaview Avenue NW, N/O NW 63rd Street	30	NB	34.7	SB	35	2.0%
Nickerson Street, W/O Warren Avenue N	30	EB	34.6	WB	36.6	4.0%
S Othello Street, E/O 43rd Avenue S	30	EB	33.5	WB	32.8	0.9%
Fremont Avenue N, S/O N 42nd Street	35	NB	32.7	SB	35.0	0.5%
SW Roxbury Street, E/O 26th Avenue SW	30	EB	32.4	WB	32.8	7.2%
NW 65th Street, W/O 12th Avenue NW	30	EB	31.9	WB	31.9	0.5%
S Lucile Street, W/O Airport Way S	30	EB	30.6	WB	30.1	0.3%
Madison Street, SW/O Lake Washington Blvd	30	NEB	28.5	SWB	29.3	0.3%
Roosevelt Way NE, N/O NE 52nd Street	30			SB	32.7	2.1%

*The percent of drivers going 10 percent or more above the speed limit. The highest percent direction is shown.

This page intentionally left blank.

There were 11,913 reported collisions on Seattle streets in 2010, down nearly 11 percent.

Traffic Collisions

While most collisions result from road user error or inattention, collision data can be used to help gauge the effectiveness of engineering and enforcement efforts and can help engineers identify locations that may benefit from additional engineering treatments or enhanced enforcement efforts. Only collisions for which the police receive or create a report are included in the data used for this report.

There were 11,913 reported collisions on Seattle streets in 2010, down nearly 11 percent from 2009. The tables in this section provide an overview of these collisions. Greater detail on specific types of collisions such as those involving pedestrians or bicycles can be found in the appendices.

In 2010, as in 2009, the most common type of collision was with a parked car, followed by right-angle collisions and rear-end collisions.

Law enforcement officers are responsible for determining, where possible, the cause of a collision. The table on 3-2 shows contributing circumstances; the three most commonly identified contributing circumstances are not granting the right of way to a vehicle, inattention and following too closely.

2010 Total Collisions by Collision Type

Collision Type	Total Collisions	Percent of All Collisions
Parked Car	2,462	21%
Right Angle	1,940	16%
Rear End	1,782	15%
Turning Vehicle	986	8%
Sideswipe	966	8%
Hit Object	814	7%
Other	584	5%
Pedestrian	529	4%
Bicycle	366	3%
Head On	46	0%
Unknown	1,438	13%
Grand Total	11,913	100%

Please note that the number of contributing circumstances is higher than the number of collisions because more than one driver may be involved in each collision.

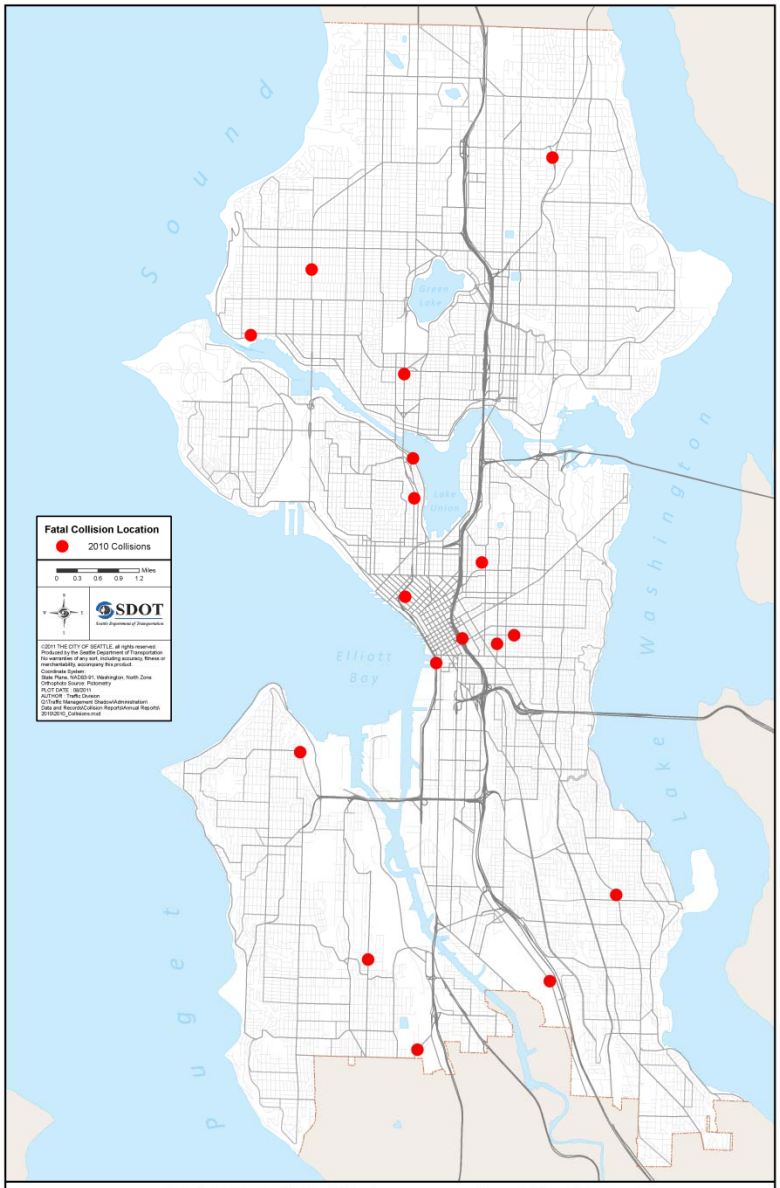
Contributing Circumstance	Number
None noted	6,609
Did Not Grant Right of Way to Vehicle	2,073
Inattention	865
Following to Closely	821
Improper Turn	473
Improper Backing	448
Disregard Stoplight	426
Did Not Grant Right of Way to Pedestrian	421
Under the Influence of Alcohol	408
Exceeding Reasonable and Safe Speed	392
Disregard Stop Sign	193
Over the Center Line	193
Operating Defective Equipment	109
Distractions Outside Vehicle	105
Improper U-Turn	104
Exceeding Speed Limit	87
Improper Passing	81
Disregard Yield Sign	61
Objects Inside Vehicle	60
Apparently Ill	46
Apparently Asleep	45

Contributing Circumstance, continued	Number
Distractions Inside Vehicle	35
Operating Handheld Cell Phone	26
Improper Parking Location	26
Under the influence of Drugs	22
Apparently Fatigued	13
Adjusting Audio or Entertainment System	12
Eating or Drinking	12
Failing to Signal	10
Smoking	8
Operating Other Electronic Devices	8
Had Taken Medication	6
Headlight Violation	5
Disregard Flagger/Officer	5
Improper Signal	3
Operating Hands-Free Cell phone	2
Reading or Writing	2
Grooming	1
Other	3,079
Unknown	2,940
Total	20,235

In 2010, there were 19 traffic fatalities on Seattle streets, approximately 26 percent of which were pedestrian fatalities. This 2010 Collision Fatalities list shows the location and date of the collisions that resulted in a fatality, as well as characteristics of the deceased.

No.	Location	Date	Type	Ag	Sex
1	Aurora Ave N & N Phinney Way	01/28/10	Pedestrian	47	M
2	16th Ave SW between SW Orchard St and SW Othello St	03/09/10	Ran off Road	44	M
3	Rainier Ave S between S Lucile St and S Findlay St	03/13/10	Head on	25	M
4	SW Admiral Way between 36th Ave SW and 37th E Ave SW	03/21/10	Head on	29	M
5	NW 54th St between NW Market St and 30th WR* Ave NW	04/04/10	Ran off Road	20	M
6	NW 54th St between NW Market St and 30th WR* Ave NW	04/04/10	Ran off Road	19	M
7	NW 54th St between NW Market St and 30th WR* Ave NW	04/04/10	Ran off Road	20	M
8	Olson Pl SW between 3rd Ave SW and SW Cambridge Pl	04/21/10	Head on	66	M
9	16th Ave and E Jefferson St	05/03/10	Pedestrian	51	F
10	Harvard Ave N between E Thomas St and E Harrison St	05/03/10	Pedestrian	91	F
11	24th Ave NE between Lake City Way NE and NE Northgate	05/30/10	Ran off Road	27	M
12	Aurora Ave N between Garfield St and Howe St	05/31/10	Ran off Road	23	M
13	12th Ave and E Alder St	07/28/10	Bicycle	36	M
14	Airport Way S between S Othello St and Military Rd S	08/17/10	Left Turn	51	M
15	Westlake Ave N between Halladay St and Newell St	09/03/10	Ran off Road	30	M
16	1st Ave S Off Ramp between Alaskan WY Viaduct SB and 1st	09/10/10	Ran off Road	53	M
17	15th Ave NW between NW 73rd St and NW 75th St	10/21/10	Rear End	37	M
18	7th Ave and Cherry St	11/17/10	Pedestrian	80	F
19	2nd Ave and Bell St	12/27/10	Pedestrian	48	F

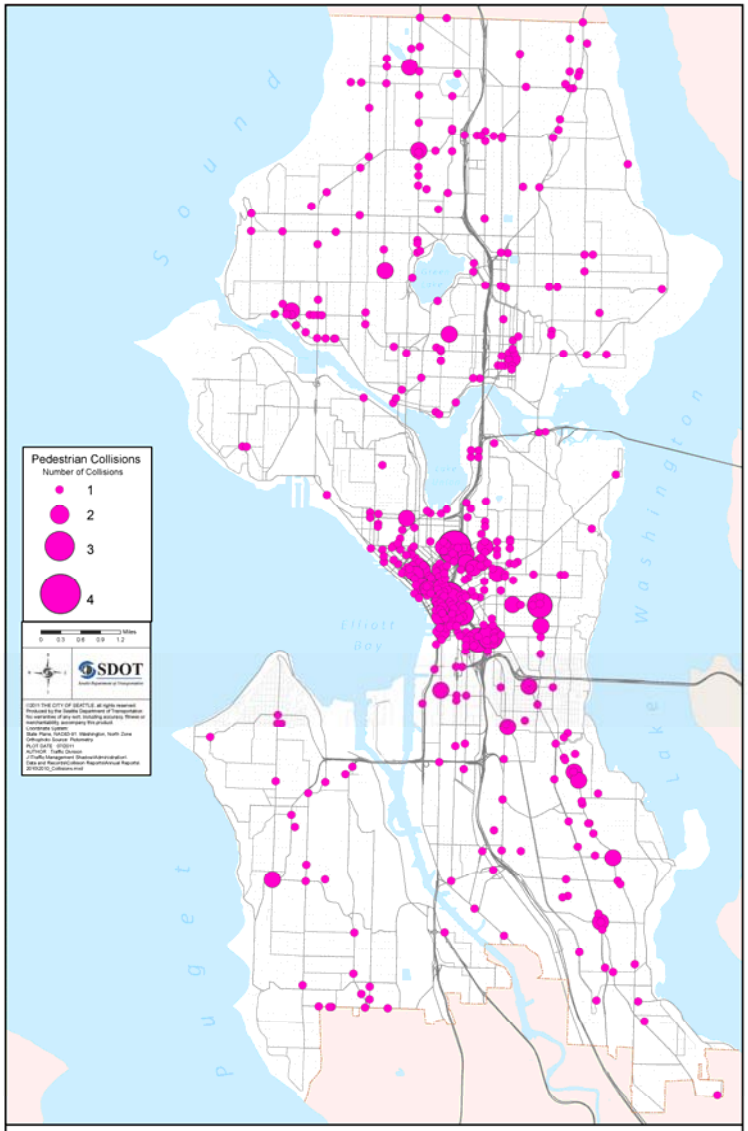
*West Roadway



2010 Fatal Collisions on Seattle Streets

In 2010, there were five pedestrian collisions in Seattle resulting in a fatality. This is the lowest number of pedestrian fatalities in a calendar year since 2002.

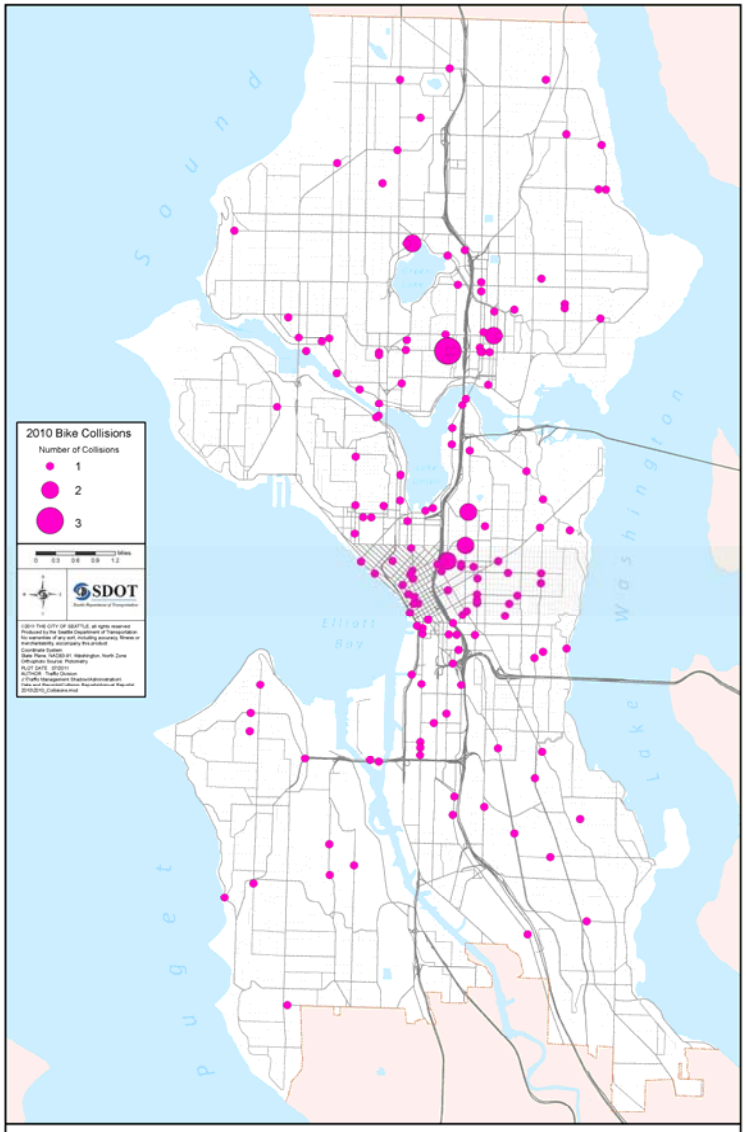
Pedestrian-Involved Collisions			
Year	**Total Collisions**	**Injury Collisions**	**Fatal Collisions**
2001	474	430	10
2002	476	465	5
2003	454	446	11
2004	457	368	10
2005	473	452	8
2006	565	542	10
2007	490	480	6
2008	503	448	9
2009	479	429	11
2010	529	454	5
10-year Average	485	451	8.5



2010 Pedestrian Collisions on Seattle Streets

There was only one reported fatal collision involving a bicyclist in 2010.

Bicycle-Involved Collisions			
Year	Total Collisions	Injury Collisions	Fatal Collisions
2001	302	238	2
2002	293	267	1
2003	263	229	0
2004	257	211	1
2005	279	245	0
2006	354	305	2
2007	359	310	1
2008	355	310	2
2009	382	325	4
2010	366	301	1
10-year average	321	274	1.4



2010 Bicycle Collisions on Seattle Streets

Seattle's number of motor-vehicle collisions and the citywide collision rate are both falling.

Collision rates are commonly used to compare the frequency of collisions at different locations by normalizing the total number of collisions against the traffic volume at an intersection or mid-block location. Collision rates can be useful in expressing trends over time. SDOT is beginning to use collision rates as one method to evaluate engineering improvements, document traffic trends and prioritize transportation projects.

Collision rates can be calculated in several different ways. The city of Seattle is using the following formulae:

- Intersection Collision Rate Formula - the number of collisions per million vehicles entering per year.
  *N*1,000,000/24-hr entering volume*365 days*

- Road Segment Collision Rate Formula - the number of collisions per million vehicle-miles of travel per year per road segment.
  *N*1,000,000/length of segment in miles*AADT*

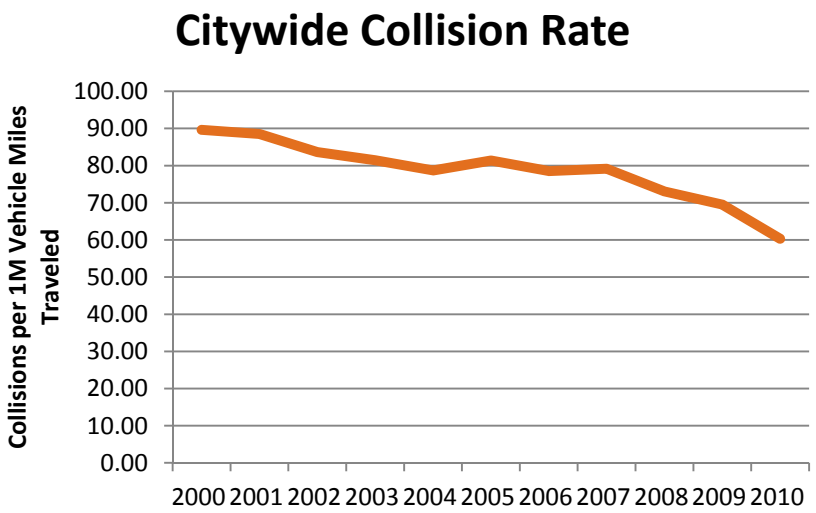
Spot comparisons of collision rates can be made for measuring the effectiveness of engineering and enforcement.

Vehicle Collision Rate Trends

Using SDOT's annual arterial traffic count program data, we have derived the Average Daily Traffic (ADT) for Seattle.

Citywide Collision Rate

We have seen a downward trend in the citywide collision rate. Care should be exercised in interpreting this rate. The ADT used is a citywide approximation of arterial traffic volumes and in this case it has been adjusted to exclude volumes on I-5, I-90 and SR-520 because our collision data do not include collisions on these highways. Collisions occur on both arterial and non-arterial streets. Though the methodology is imperfect, it is nevertheless illustrative.

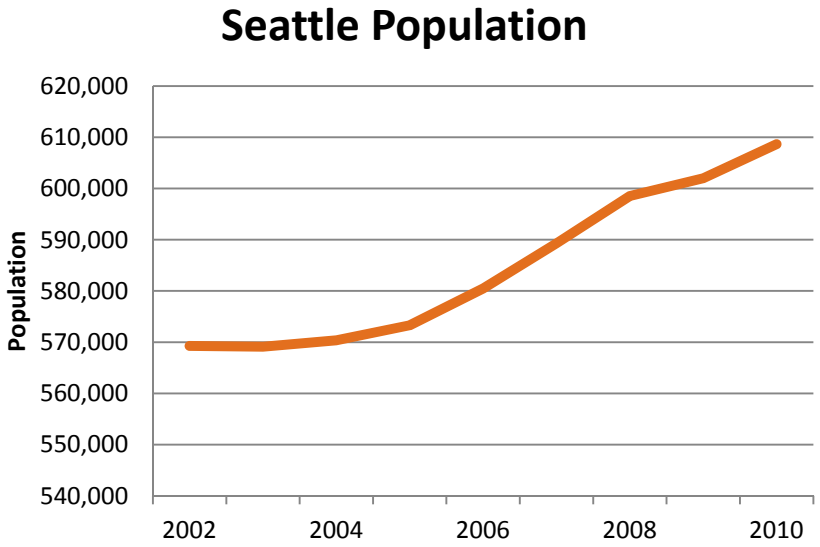


Year	Collisions	Average Daily Traffic	AADT	Citywide Collision Rate
2000	17,846	545,548	199,125,020	89.62
2001	17,547	543,006	198,197,041	88.53
2002	16,497	540,351	197,228,115	83.64
2003	16,057	540,028	197,110,220	81.46
2004	15,527	540,423	197,254,395	78.72
2005	16,148	543,675	198,441,375	81.37
2006	15,967	557,068	203,329,820	78.53
2007	15,134	523,616	191,119,840	79.19
2008	14,173	531,508	194,000,420	73.06
2009	13,344	525,925	191,962,687	69.51
2010	11,913	541,320	197,581,800	60.29

Pedestrian- and Bicycle-involved Collision Rates

Calculating collision rates for pedestrian- and bicyclist-involved collisions is complex, primarily because of the difficulty and expense of collecting the necessary data, and a lack of agreement in the industry on factors that should be considered.[1] However, SDOT uses simple formulae for calculating a citywide rate that may be useful in identifying citywide trends:

- Citywide annual pedestrian collisions per capita: *N/Seattle Population*
- Citywide annual bicycle collisions per capita: *N/Seattle Population*

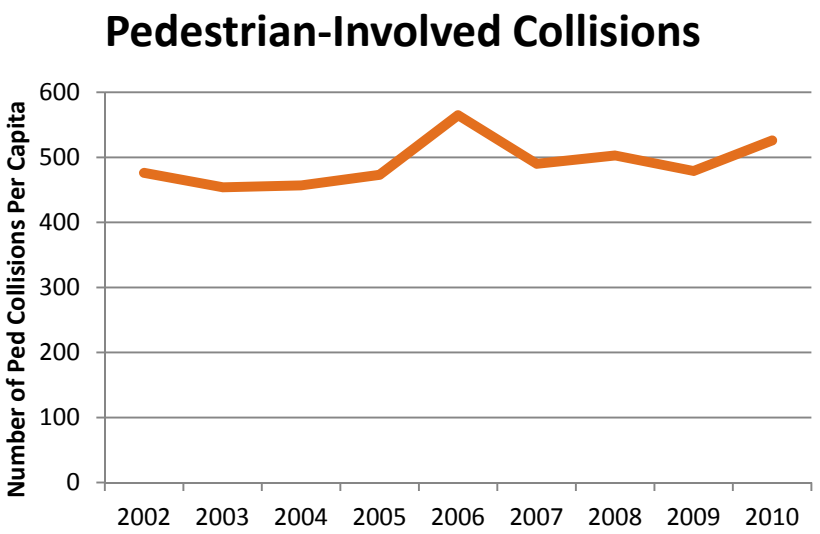


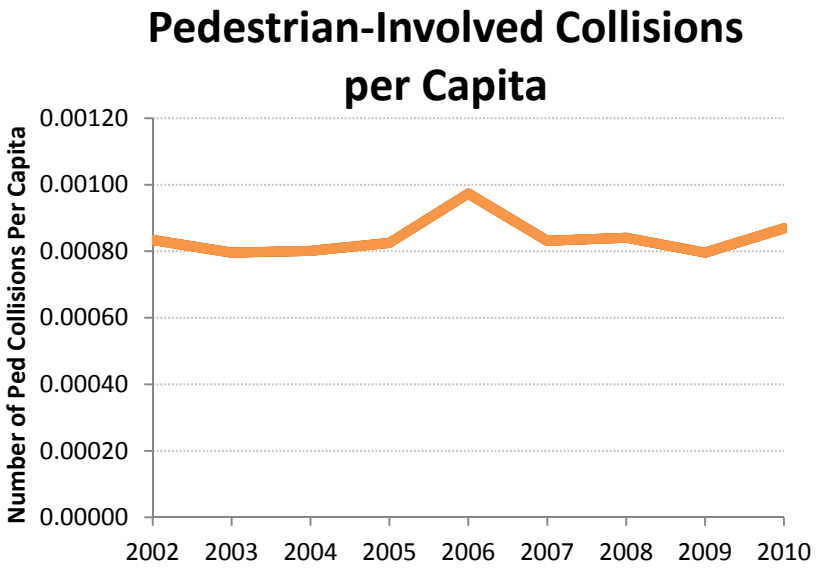
[1] Metropolitan Transportation Commission, San Francisco, CA http://www.mtc.ca.gov/planning/bicyclespedestrians/safety/analysis.htm

Pedestrian Collision Rate

The 2009 Pedestrian Master Plan defined a decreasing trend in the rate of collisions involving pedestrians as a safety goal. Since 2002, Seattle's population has grown about seven percent. During the same time, Seattle has seen a slight increase in the absolute number of pedestrian-involved collisions.

When we normalize pedestrian-involved collisions against Seattle's population, there is a much flatter trend for pedestrian-involved collisions per capita. SDOT anticipates that with new planning and funding devoted to pedestrian improvements, the rate of pedestrian involved collisions per capita should decrease.





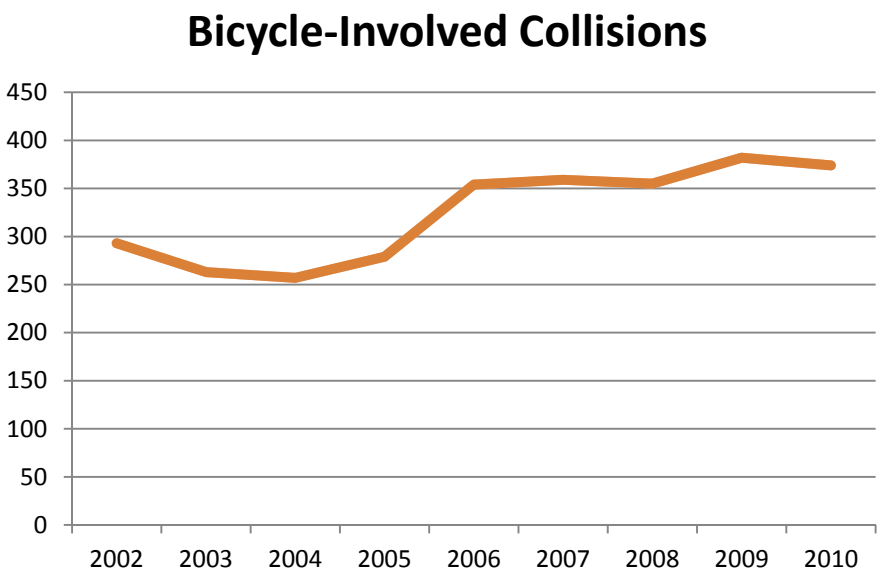
Pedestrian-involved Collisions Per Capita

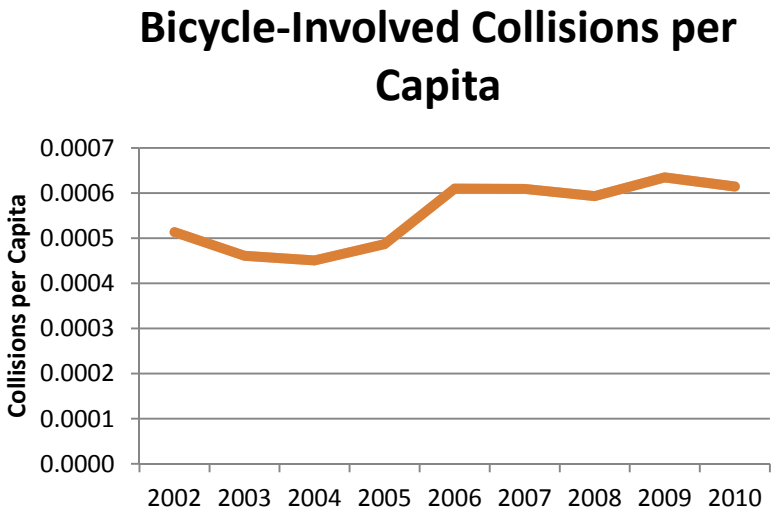
Year	Pedestrian-Involved Collisions	Seattle Population	Pedestrian collisions per capita
2002	476	570,859	0.00083
2003	454	570,437	0.00080
2004	457	570,375	0.00080
2005	473	573,296	0.00083
2006	565	580,485	0.00097
2007	490	589,304	0.00083
2008	503	598,541	0.00084
2009	479	602,000	0.00080
2010	529	608,660	0.00087

Bicycle Collision Rate

The 2007 Bicycle Master Plan sets an ambitious goal of decreasing the rate of bicycle-involved collisions by a third over the 10-year life of the plan. SDOT's collision data show a decrease in the number and rate of bicycle-involved collisions from 2009 to 2010, but the sheer number of collisions is higher than it was before the adoption of the Bicycle Master Plan in 2007.

Population is not the best way to normalize bicycle collisions because a relatively small percentage of the population ride bicycles with regularity – we do this primarily to provide a visual comparison with pedestrian collisions.





Bicycle-involved Collisions Per Capita

Year	Bicycle-Involved Collisions	Seattle Population	Bicycle-Involved Collisions Per Capita
2002	293	570,859	0.0005
2003	263	570,437	0.0005
2004	257	570,375	0.0005
2005	279	573,296	0.0005
2006	354	580,485	0.0006
2007	359	589,304	0.0006
2008	355	598,541	0.0006
2009	382	602,000	0.0006
2010	366	608,660	0.0006

SDOT partners with the Seattle Police Department (SPD) to focus enforcement in the right places.

Traffic Enforcement

A critical component of traffic safety is enforcement. SDOT partners with the Seattle Police Department (SPD), sharing information that helps focus enforcement efforts in the right places. Enforcement can curb undesirable behavior such as speeding, aggressive driving, jaywalking and failure to yield the right of way.

SDOT regularly receives suggestions about street locations where additional traffic enforcement might help curb undesirable traffic behavior. In addition, as a result of our engineers' work, SDOT identifies locations where police enforcement might yield a better roadway environment. SDOT forwards enforcement requests to the SPD Traffic Section monthly, and the SPD Traffic Section takes these requests into consideration as they allocate their officers' time and efforts. SPD regularly, though informally, reports back to SDOT about the results of enforcement at requested locations.

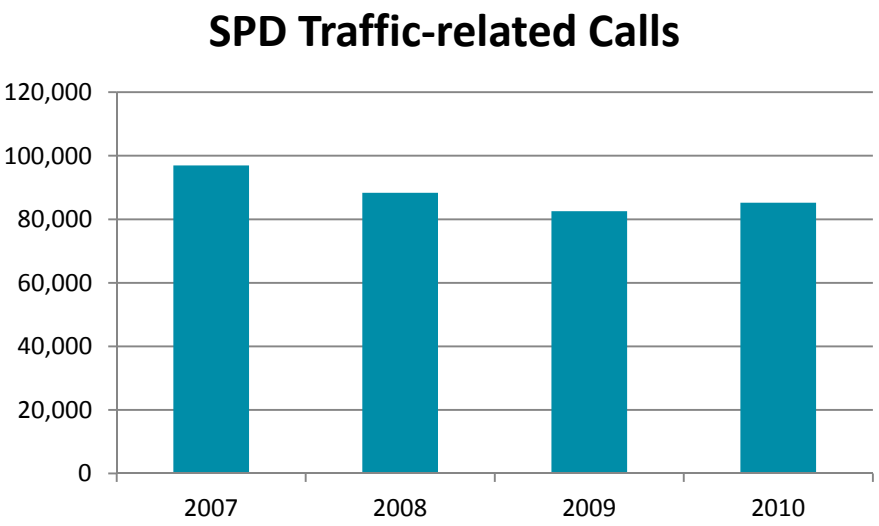
Pedestrian Safety Emphasis Patrols

SPD has a program of pedestrian safety emphasis patrols, where an officer dressed in plain clothes acts as a pedestrian crossing the street at a legal crossing to enforce driver compliance with laws that require drivers yield the right-of-way to pedestrians who are legally crossing the street. In 2010, SPD completed operations at two locations. Forty-eight violations were written.

Traffic Citations

Because of the way police officer call data is recorded, SDOT is using two data sets for analysis. The first is the data extracted from SPD's computer-aided dispatch system (CAD). This system records officers' "calls." SDOT is also using the infraction statistics from SPD's Traffic Section. On page 5-3 is a listing of the number of citations issued by members of SPD's cadre of traffic police.

CAD-generated data does not reflect a high degree of specificity within certain types of incidents. For example, a "moving violation" call may or may not have resulted in a citation. It might be a speeding ticket, a failure-to-yield ticket or any other type of moving violation. SPD's Traffic Section's statistics contain this level of detail, but their statistics do not reflect traffic infractions issued by SPD's non-traffic patrol officers and aren't always recorded in the CAD system. These are very different sets of data, which cannot be combined.



2007-2010 Seattle Police Department Traffic-related Calls

Type of Incident	2007	2008	2009	2010
Blocking Traffic	2,890	2,774	2,204	2,444
Accident Investigation	21,111	20,386	17,884	18,061
Assist Motorist	2,173	2,027	1,754	1,663
DUI	1,703	1,637	1,812	2,060
Moving Violation	36,971	32,838	33,861	37,131
Pedestrian Violation	2,649	1,981	1,824	2,676
Parking Violation (excluding abandoned vehicles)	29,361	26,592	21,630	20,845
Traffic Control (special events)	56	62	44	36
Refuse to Stop (pursuit)	53	45	39	44
Unknown Traffic-related Incident	n/a	n/a	1,507	248
GRAND TOTAL	**96,967**	**88,342**	**82,559**	**85,208**

Source: Seattle Police Department Computer-Aided Dispatch (CAD) Call Data

It is perhaps not surprising that the number one citation issued by Traffic Section officers is for speeding. Speeding is a top complaint of residents and a reason often cited as to why people are uncomfortable crossing the street. It is also cited as a factor that affects general neighborhood livability.

Citations for Leading Contributing Factors in Collisions

When a collision occurs, one or all of the drivers involved may be cited for a traffic infraction, and the contributing factors noted on the collision report. Based on collision reports, the most common contributing factor to collisions is drivers not properly yielding the right of way.

Automated Traffic Enforcement

2009-2010 Seattle Police Department - Traffic Section Citations

Type of Infraction	2009	2010
Pedestrian infraction	1,274	1,570
Warnings	3,557	5,071
School Zone-related	3,727	1,468
Moving Violations	29,347	27,384
Right of Way to Pedestrians	406	197
Right of Way to Vehicles	140	165
Signal/Stop Sign	2,226	2,172
Speeding	20,868	19,323
Aggressive Driving	1,740	1,884
Turns	2,816	2,047
Negligent Driving	160	157
Reckless Driving	26	25
Inattention to Driving	186	335
HOV lanes	779	1,079

Source: SPD Traffic Section Citation Data

The city of Seattle uses two kinds of automated photo enforcement: traffic safety cameras located at signalized intersections; and a mobile speed van, used in school zones and on arterial streets with documented speeding issues.

Traffic Safety Cameras

Seattle Police Department currently has 30 traffic safety cameras – also known as red light cameras – at 21 different arterial intersections throughout the city. Based on evaluation of the first six cameras deployed in 2006, the cameras reduced red-light running by more than 40 percent. These same camera locations showed an 18 percent drop in red light-related collisions (right-angle crashes), comparing three years before cameras (55 collisions) with three years after (45 collisions). These findings are preliminary and should be used cautiously as SDOT data show that collision rates are down citywide over the last decade**.** In 2010, the traffic safety cameras resulted in SPD issuing 45,802 citations, as detailed in the table on page 5-4.

2010 Traffic Safety Camera Locations	Cross Streets		2010 citations
North Seattle	45th Street	Roosevelt Way	1,968
	NW Market Street	15th Avenue NW	3,068
	NW Market Street	15th Avenue NW	1,177
	15th Avenue NW	NW 80th Street	2,973
	Stone Way N	NW 40th Street	2,679
	Aurora Avenue N	NW 85th Street	1,973
	NE 80th Street	5th Avenue NE	555
	NE 45th Street	Union Bay Place	1,699
	NE 45th Street	Union Bay Place	1,624
	NE 45th Street	Union Bay Place	241
Central Seattle	6th Avenue	James Street	3,359
	5th Avenue	Spring Street	2,075
	Denny Way	Fairview Avenue	1,914
	Denny Way	Fairview Avenue	1,191
	Broadway	E Olive Way	1,125
	Olive Way	Broadway	820
	Broadway	Pine Street	1,415
	Boren Avenue	James Street	763
	23rd Avenue E	E John Street	1,667
	9th Avenue	James Street	568
South Seattle	Rainier Avenue	S Orcas Street	625
	Rainier Avenue	S Orcas Street	1,230
	14th Avenue S	S Cloverdale Street	393
	S Cloverdale Street	14th Avenue S	1,752
	SW Avalon Way	35th Avenue SW	1,033
	35th Avenue SW	SW Thistle Street	1,999
	Rainier Ave S	S Massachusetts	3,851
	S McClellan Street	Martin Luther King Jr Way S	486
	Martin Luther King Jr. Way S	S McClellan Street	1,262
	Martin Luther King Jr. Way S	S McClellan Street	317

Note: Each intersection may have multiple approaches and cameras.

Speed Van Photo Enforcement

The Seattle Police Department also deploys a mobile van equipped with a traffic safety camera and across-the-road radar to document and issue citations for school zone and arterial street speed violations. The primary purpose of the "speed van" is to enhance pedestrian safety by slowing vehicle speeds and citing speed zone violators.

Beginning in April 2010, SPD initiated photo speed enforcement on arterial streets in a pilot project authorized during the 2009 state legislative session. Using the same photo radar van employed in school zones, the SPD Traffic Section deploys the van to selected arterial locations four days per week, in an effort to gauge effects on speeding. In 2010, the speed van photo enforcement resulted in Seattle Police Department issuing 1,808 citations, as shown in the table below.

The speed van has been effective when and where deployed. An evaluation of results from the pilot deployment of the van during the 2008-2009 school year showed a decrease of between 5 miles per hour and 10 miles per hour in school zones with children present – a critical reduction for pedestrian safety.

2010 Speed Van Locations	Cross Streets		2010 Citations
Bryant Elementary School	NE 60th Street	35th Avenue NE	260
Bagley Elementary School	N 80th Street	Stone Avenue N	20
West Woodland Elementary School	NW 58th Street	3rd Ave NW	58
Gatewood Elementary School	SW Myrtle Street	Fauntleroy Way SW	297
Arterial	35th Avenue SW	SW Dawson Street	593
Arterial	Elliott Avenue W	6th Avenue W	580

Project Outcomes

- **High-end speeders declined**
- **Injury collisions declined**
- **Traffic volume and travel time increased slightly**

Data Use Case Study: Fauntleroy Way SW

Thanks to funding made available by the Bridging the Gap levy, SDOT repaved Fauntleroy Way SW in 2009. The repaving project provided an opportunity to reconfigure the roadway using the Complete Streets approach, accommodating freight, transit, pedestrians, bicycles and motor vehicles. This included re-striping from four travel lanes to one lane in each direction with a left turn lane, a bicycle lane uphill, and a new marked crosswalk and curb bulb.

The changes to Fauntleroy Way SW have improved conditions for all users of the roadway. The number of speeders is down. A new marked crosswalk has been provided in a location where it was difficult to cross. Motor vehicle traffic volume has not declined. While there is some additional delay for motor vehicle drivers, the Complete Streets approach has resulted in some significant benefits for drivers including a reduction in the number of collisions, especially the number of injury collisions.

Collisions

Collisions declined after the rechannelization was completed. The total number of collisions declined 31 percent while the number of collisions involving injury declined 73 percent. Left-turn, cyclist and sideswipe collisions all declined to zero. Collisions involving parked cars declined 50 percent. The only increase noted was the number of incidents involving rear-end collisions.

Collisions								
	Total	**Injury**	**Right Angle**	**Rear end**	**Side Swipe**	**Cyclist**	**Left Turn**	**Parked Car**
Before	20.3	7.3	3.7	3	2	.3	2	6.7
After	14	2	5	6	0	0	0	3
Change	-31%	-73%	36%	100%	-100%	-100%	-100%	-55%
Collision data in the before period is average 2005-2008 and average December 2009-December 2010								

Speed

After the project was completed, speeding declined. Drivers traveling at 40 mph or faster declined 7 percent northbound and 17 percent southbound. Reducing the number of top-end speeders can have a significant benefit for pedestrians. According to a 1987 report by the U.K Department Transportation, a pedestrian struck by a motor vehicle traveling 40 miles per hour has a 15 percent chance of surviving the event. Reducing vehicle speed to 30 mph increases the chance of survival to 55 percent.

Speed				
Fauntleroy Way SWE at SW Brandon Street				
		85th Percentile Speed	Percent Speeding	Top-end Speeders
Before	Northbound	38.8	90%	13%
	Southbound	39.6	90%	18%
After	Northbound	38.6	90%	12%
	Southbound	39.0	76%	15%
Combined Change		-1%	-7%	-13%
Before data collected in October, 2008. After data collected in February 2011				

Volume

Traffic volume increased slightly after the rechannelization was completed. Average weekday traffic increased 0.4 percent northbound and 0.3 percent southbound. Total average weekday traffic volume remained roughly 17,500 vehicles.

Volume					
Fauntleroy Way SW at SW Edmunds Street					
		Average Daily Traffic	Weekday Traffic	Peak Morning	Peak Afternoon
Before	Northbound	8,250	8,802	1,021	497
	Southbound	8,216	8,797	378	977
After	Northbound	8,268	8,837	998	537
	Southbound	8,240	8,828	423	940
Change		0.2%	0.3%	1.5%	0.1%

Before data collected in May, 2008. After data collected in May, 2011

Travel Time

Travel time along the corridor increased slightly for motor vehicles. This increase varied by direction and time of day. In the southbound direction, the increase in travel time was four seconds in the morning and 76 seconds in the afternoon. Northbound the increase in travel time was 45 seconds in the morning and five seconds in the afternoon.

Morning Peak Travel Time		
Alaska to California	2009	2011
Northbound	2 min, 52 sec	3 min, 37 sec
Southbound	2 min, 51 sec	2 min, 55 sec

Afternoon Peak Travel Time		
Alaska to California	2009	2011
Northbound	2 min, 34 sec	3 min, 39 sec
Southbound	2 min, 46 sec	3 min, 40 sec

This page intentionally left blank.

Following a consistent, statistically valid methodology will improve the quality and consistency of our data.

Future Data Collection

SDOT's ability to collect data in a way that helps establish and illustrate traffic trends continues to grow. We have always collected collision data and use it regularly to prioritize safety improvements and to assess where our safety improvements might be helpful. Volume data is collected at regular locations annually, and in some cases monthly, and paints a picture of where traffic is growing and diminishing. In 2010, SDOT began collecting speed data much as we collect volume data – at specified locations each year.

Bicycle Participation

Historically, Seattle has used spot counts to measure the number of cyclists. Spot counts are limited in that they collect information only at certain locations. While this data is valuable, the results cannot be extrapolated and applied to the whole city.

In 2011, SDOT has conducted a survey to determine bicycle "participation." The survey has polled a statistically valid sample of Seattle residents to determine how many people ride their bicycles, how often and for what purpose. The percentages drawn from this survey will be applied to Seattle's population to give a truer picture of how many

people ride their bikes in Seattle – whether for commuting, errands, or recreation. These numbers will be reported in the 2011 Traffic Report and will be used to calculate bicycle-involved collision rates and may be used for campaigns to encourage more people to bicycle.

Bicycle and Pedestrian Counts

In this report, SDOT uses a number of methods to count aggregate numbers of pedestrians and bicyclists: the population of Seattle, the American Community Survey commuter estimates and the Downtown Seattle Association pedestrian count numbers. Starting in 2011, SDOT is conducting pedestrian and bicycle volume counts at 50 locations across Seattle in January, May, July and September as part of the National Bicycle & Pedestrian Documentation Project[1]. The locations were selected to preserve many existing bicycle count locations, while taking Pedestrian Master Plan high-priority locations into consideration.

Following a consistent, nationally recognized methodology will improve the quality and consistency of our data, and also increase the frequency with which we collect this type of data. The information we collect will document current levels of walking and biking, help us measure our progress towards increasing the number of people who walk and bike, and help make the case for additional investments.

[1] http://bikepeddocumentation.org/

Appendices

2010 Volume Count Locations

Control Count Locations
1. DENNY WAY, W/O 2ND AVE
2. E MADISON ST, SW/O 17TH AVE
3. EAST GREEN LAKE WAY N, NE/O N 57TH ST
4. FREMONT BR, S/O POINT A
5. N 85TH ST, W/O ASHWORTH AVE N
6. QUEEN ANNE AVE N, S/O CROCKETT ST
7. UNIVERSITY BR, SW/O POINT A
8. LAKE CITY WAY NE, NE/O NE 95TH ST
9. M L KING JR. WAY S, N/O S ANDOVER ST
10. NW MARKET ST, W/O 8TH AVE NW
11. RAINIER AVE S, S/O S OTHELLO ST
12. S LANDER ST, W/O 6TH AVE S
13. ALKI AVE SW, W/O HARBOR AVE SW
14. 3rd Ave SE/O Union St
15. ALASKAN WAY SE/O BLANCHARD
16. STEWART St, NE/O 4th AVE
17. UNIVERSITY ST, SW/O 4th AVE
18. EAST MARGINAL WAY S, S/O S ALASKA ST
19. WEST SEATTLE BRIDGE, NE/O FAUNTLEROY
20. SW SPOKANE BRIDGE, W/O SW SPOKANE ST

Screen Line Count Locations	
ALASKAN WY VI NB, S/O 1ST AV S ON RP	N 85TH ST, W/O LINDEN AVE N
ALASKAN WY VI SB, S/O 1ST AV S OFF RP	VALLEY ST, W/O FAIRVIEW AVE N
ALASKAN WY VI NB, N/O EAST MARGINAL WAY S	12TH AVE NE, S/O NE 75TH ST
ALASKAN WY VI SB, N/O EAST MARGINAL WAY S	15TH AVE NE, S/O NE 145TH ST
EAST MARGINAL WAY S, N/O ALASKAN WY VI NB	15TH AVE NE, S/O NE 65TH ST
EAST MARGINAL WY S, N/O ALASKAN WY VI SB	15TH AVE NE, S/O NE 75TH ST
MARION ST, W/O ALASKAN WAY	1ST AVE NE, S/O NE 145TH ST
YESLER WAY, W/O ALASKAN WAY	25TH AVE NE, S/O NE 47TH ST
YESLER WAY, W/O ALASKAN WAY	25TH AVE NE, S/O NE 75TH ST
1ST AV S BR NB, S/O POINT A	30TH AVE NE, S/O NE 145TH ST
1ST AV S BR SB, S/O POINT A	35TH AVE NE, S/O NE 75TH ST
ALASKAN WY VI NB, NW/O 1ST AV S ON RP	5TH AVE NE, S/O I5 145 OF
ALASKAN WY VI SB, NW/O 1ST AV S OFF RP	LAKE CITY WAY NE, S/O NE 145TH ST
BATTERY ST TUNNEL NB, N/O ALASKAN WY VI NB	MONTLAKE BR, S/O POINT A
BATTERY ST TUNNEL SB, S/O AURORA AVE N	NE 145TH ST, E/O 5TH AVE NE
BEACON ER AVE S, S/O S SPOKANE ST	NE 45TH ST, W/O NE 45TH PL
BEACON WR AVE S, S/O S SPOKANE ST	NE 45TH ST, W/O ROOSEVELT WAY NE
SR509 NB, S/O CLOVERDALE ST OFF RP	NE 50TH ST, W/O ROOSEVELT WAY NE
SR509 SB, S/O CLOVERDALE ST ON RP	NE 55TH ST, E/O 35TH AVE NE
WEST SEATTLE BR EB, E/O 1ST AV S OFF RP	NE 75TH ST, W/O ROOSEVELT WAY NE
WEST SEATTLE BR WB, W/O 4TH AV S OFF RP	NE 80TH ST, E/O 5TH AVE NE
WEST SEATTLE BR EB, E/O DELRIDGE-W SEATTLE BR EB ON RP	NE NORTHGATE WAY, E/O 5TH AVE NE
WEST SEATTLE BR WB, E/O W SEATTLE BR WB OFF RP	NE PACIFIC ST, NE/O 2ND AVE NE
WEST SEATTLE BR EB, NE/O FAUNTLEROY WAY SW	ROOSEVELT WAY NE, N/O NE 50TH ST
WEST SEATTLE BR WB, NE/O 35TH AVE SW	ROOSEVELT WAY NE, N/O NE 73RD ST
ELLIOTT AVE, W/O LENORA ST	ROOSEVELT WAY NE, SE/O NE 130TH N ST
WESTERN AVE, NW/O LENORA ST	SAND POINT WAY NE, S/O NE 74TH ST

Screen Line Count Locations, continued	
S COLUMBIAN EB WAY, NW/O 14TH AVE S	15TH AVE NW, S/O NW 80TH ST
S COLUMBIAN WB WAY, NW/O 14TH AVE S	24TH AVE NW, S/O NW 80TH ST
I5 CHERRY REV RP, E/O CHERRY ST	32ND AVE NW, S/O NW 80TH ST
I5 COLUMBIA REV RP, E/O COLUMBIA ST	3RD AVE NW, S/O NW 145TH ST
1ST AVE, NW/O LENORA ST	3RD AVE NW, S/O NW 80TH ST
1ST AVE, SE/O PIKE ST	8TH AVE NW, S/O NW 80TH ST
2ND AVE, NW/O LENORA ST	12TH AVE S, S/O S WELLER ST
2ND AVE, SE/O PIKE ST	14TH AVE S, N/O S DIRECTOR ST
3RD AVE, NW/O LENORA ST	15TH AVE S, S/O S BRADFORD ST
3RD AVE, SE/O PIKE ST	16TH AVE S, N/O 16TH AVE S BR
4TH AVE, NW/O LENORA ST	1ST AV S OFF RP, SE/O ALASKAN WY VI SB
4TH AVE, SE/O PIKE ST	1ST AV S ON RP, SE/O ALASKAN WY VI NB
5TH AVE, NW/O LENORA ST	1ST AVE S, N/O S KING ST
5TH AVE, SE/O PIKE ST	1ST AVE S, S/O S SPOKANE SR ST
6TH AVE, NW/O LENORA ST	23RD AVE S, S/O S JACKSON ST
6TH AVE, SE/O PIKE ST	31ST AVE S, S/O S JACKSON ST
7TH AVE, NW/O LENORA ST	4TH AVE S, N/O S DAWSON ST
7TH AVE, SE/O PIKE ST	4TH AVE S, S/O 2ND AV ET S
8TH AVE, SE/O PIKE ST	51ST AVE S, S/O S BANGOR ST
ALASKAN WAY, SE/O BLANCHARD ST	8TH AVE S, S/O S DIRECTOR ST
ALASKAN WAY, SE/O PIKE ST	AIRPORT WAY S, N/O S NORFOLK ST
COLUMBIA ST ON RP, NE/O ALASKAN WY VI SB	AIRPORT WAY S, NW/O S LUCILE ST
DENNY WAY, E/O MINOR AVE	ALASKAN WAY S, N/O S KING ST
DENNY WAY, E/O WESTLAKE AVE	EAST MARGINAL WAY S, SE/O BOEING DR
ELLIOTT AV ON RP, NW/O ALASKAN WY VI SB	M L KING JR WAY S, S/O S BRADFORD ST
I5 COLUMBIA OF, N/O COLUMBIA ST	M L KING JR WAY S, S/O S NORFOLK ST
I5 JAMES ON, S/O 6TH AVE	MYERS WAY S, S/O OLSON PL SW

Screen Line Count Locations, continued	
I5 PIKE REV RP, N/O PIKE ST	RAINIER AVE S, E/O 75TH AVE S (CITY LIMITS)
I5 SENECA OF, S/O 6TH AVE	RAINIER AVE S, SE/O BOREN AVE S
I5 SPRING ON, S/O 6TH AVE	RAINIER AVE S, SE/O M L KING JR WAY S
I5 UNION OFF, N/O CONVENTION PL	RENTON AVE S, SE/O S BANGOR ST
I5 UNIVERSITY ON, N/O 6TH AVE	S DEARBORN ST, W/O 13TH AVE S
SENECA ST OFF RP, NE/O ALASKAN WY VI NB	S GRAHAM ST, E/O SWIFT AVE S
WESTERN AV OFF RP, NW/O ALASKAN WY VI NB	S HOLGATE BR, E/O S HOLGATE ST
WESTERN AVE, NW/O UNION ST	S JACKSON ST, E/O 5TH AVE S
EASTLAKE AVE E, SW/O HARVARD AVE E	S LUCILE ST, W/O 12TH AVE S
AURORA AVE N, S/O HARRISON ST	S MYRTLE ST, W/O BEACON WR AVE S
AURORA AVE N, S/O N 145TH ST	SR99 FY, S/O S CLOVERDALE ST
AURORA AVE N, S/O N 80TH ST	SWIFT AVE S, NW/O S ALBRO PL
AURORA BR, S/O BRIDGE WAY N	16TH AVE SW, N/O SW CAMBRIDGE ST
GREENWOOD AVE N, S/O N 145TH ST	35TH AVE SW, N/O SW ROXBURY ST
GREENWOOD AVE N, S/O N 80TH ST	8TH AVE SW, N/O SW ROXBURY ST
MERCER ST, W/O FAIRVIEW AVE N	BEACH DR SW, SE/O 61ST AVE SW
MERIDIAN AVE N, S/O N 145TH ST	CALIFORNIA AVE SW, S/O SW CHARLESTOWN ST
N 105TH ST, W/O EVANSTON W AVE N	DELRIDGE WAY SW, NW/O SW CAMBRIDGE ST
N 125TH ST, W/O AURORA AVE N	DELRIDGE WAY SW, S/O SW ANDOVER ST
N 130TH ST, W/O LINDEN AVE N	OLSON PL SW, SW/O 1ST AVE S
N 145TH ST, W/O LINDEN AVE N	SEAVIEW AVE NW, N/O NW 67TH ST
N 46TH ST, W/O PHINNEY AVE N	SW 106TH ST, W/O SEOLA BEACH DR SW
N 50TH ST, W/O FREMONT AVE N	SW ADMIRAL WAY, SE/O SW CITY VIEW ST
N 65TH ST, W/O LINDEN AVE N	SW AVALON WAY, N/O 30TH AVE SW
N 80TH ST, W/O LINDEN AVE N	SW BARTON ST, SW/O FAUNTLEROY WAY SW
MAGNOLIA BR, E/O W GARFIELD ST OFF RP	WEST MARGINAL WAY SW, NW/O HIGHLAND PARK WAY SW
W DRAVUS ST, E/O 20TH AVE W	28TH AVE W, S/O W DRAVUS ST
W EMERSON PL, SE/O 21ST AVE W	34TH AVE W, N/O W BARRETT ST

Flow Count Locations	
I5 STEWART OF, N/O STEWART ST	LAKE CITY WAY NE, SW/O NE 115TH ST
I5 STEWART REV RP, N/O STEWART ST	MONTLAKE BLVD NE, N/O NE PACIFIC PL
I5 STEWART REV RP, N/O STEWART ST	NE 125TH ST, E/O 35TH AVE NE
ALASKAN WY VI NB, S/O 1ST AV S ON RP	NE 125TH ST, W/O 27TH AVE NE
ALASKAN WY VI SB, S/O 1ST AV S OFF RP	NE 45TH ST, E/O 16TH AVE NE
ALASKAN WY VI NB, N/O EAST MARGINAL WAY S	NE 50TH ST, W/O THACKERAY PL NE
ALASKAN WY VI SB, N/O EAST MARGINAL WAY S	NE 65TH ST, E/O 25TH AVE NE
EAST MARGINAL WAY S, N/O ALASKAN WY VI NB	NE 65TH ST, W/O 15TH AVE NE
EAST MARGINAL WY S, N/O ALASKAN WY VI SB	NE 65TH ST, W/O 25TH AVE NE
MARION ST, W/O ALASKAN WAY	NE 75TH ST, E/O 12TH AVE NE
YESLER WAY, W/O ALASKAN WAY	NE 75TH ST, W/O 30TH AVE NE
YESLER WAY, W/O ALASKAN WAY	NE NORTHGATE WAY, W/O 15TH AVE NE
1ST AV S BR NB, S/O POINT A	PINEHURST WAY NE, NE/O NE 115TH ST
1ST AV S BR SB, S/O POINT A	ROOSEVELT WAY NE, S/O NE NORTHGATE WAY
ALASKAN WY VI NB, NW/O 1ST AV S ON RP	SAND POINT WAY NE, SW/O NE 65TH ST
ALASKAN WY VI SB, NW/O 1ST AV S OFF RP	HOLMAN RD NW, NE/O 13TH E AVE NW
BATTERY ST TUNNEL NB, N/O ALASKAN WY VI NB	LEARY WAY NW, NW/O 3RD AVE NW
BATTERY ST TUNNEL SB, S/O AURORA AVE N	NW 80TH ST, W/O 15TH AVE NW
BEACON ER AVE S, S/O S SPOKANE ST	NW 85TH ST, W/O 16TH AVE NW
BEACON WR AVE S, S/O S SPOKANE ST	1ST AVE S, N/O S SPOKANE NR ST
SR509 NB, S/O CLOVERDALE ST OFF RP	1ST AVE S, S/O S LUCILE ST
SR509 SB, S/O CLOVERDALE ST ON RP	4TH AVE S, N/O S MICHIGAN ST
WEST SEATTLE BR EB, E/O 1ST AV S OFF RP	4TH AVE S, S/O AIRPORT WAY S
WEST SEATTLE BR WB, W/O 4TH AV S OFF RP	6TH AVE S, S/O S FOREST ST
WEST SEATTLE BR EB, E/O DELRIDGE-W SEATTLE BR EB ON RP	BEACON AVE S, N/O S SPOKANE ST
WEST SEATTLE BR WB, E/O W SEATTLE BR WB OFF RP	CORSON AVE S, N/O S MICHIGAN ST
Flow Count Locations, continued	

WEST SEATTLE BR EB, NE/O FAUNTLEROY WAY SW	CORSON AVE S, S/O S MICHIGAN ST
WEST SEATTLE BR WB, NE/O 35TH AVE SW	EAST MARGINAL WAY S, NW/O S MICHIGAN ST
ELLIOTT AVE, W/O LENORA ST	EAST MARGINAL WAY S, SE/O 4TH AVE S
WESTERN AVE, NW/O LENORA ST	ELLIS AVE S, S/O S WARSAW ST
S COLUMBIAN EB WAY, NW/O 14TH AVE S	M L KING JR WAY S, N/O S EDMUNDS ST
S COLUMBIAN WB WAY, NW/O 14TH AVE S	M L KING JR WAY S, S/O S HOLLY ST
I5 CHERRY REV RP, E/O CHERRY ST	RAINIER AVE S, N/O S ALASKA ST
I5 COLUMBIA REV RP, E/O COLUMBIA ST	RAINIER AVE S, NW/O S HOLLY ST
BOREN AVE, SE/O PIKE ST	RAINIER AVE S, NW/O S MCCLELLAN ST
BROADWAY, S/O E DENNY WAY	RENTON AVE S, N/O S CLOVERDALE ST
DENNY WAY, E/O STEWART ST	RENTON AVE S, SE/O S HENDERSON ST
DENNY WAY, W/O 6TH AVE	S COLUMBIAN WAY, W/O BEACON WR AVE S
I5 CHERRY ON, N/O CHERRY ST	S GENESEE ST, E/O 38TH AVE S
I5 JAMES OF, S/O JAMES ST	S HENDERSON ST, E/O RENTON AVE S
I5 MADISON OF, S/O MADISON ST	S JACKSON ST, W/O 23RD AVE S
I5 OLIVE OF, S/O OLIVE WY	S LUCILE ST, E/O 4TH AVE S
I5 OLIVE ON, N/O I5 MELROSE ON	S MICHIGAN ST, E/O 6TH AVE S
I5 YALE ON, S/O HOWELL ST	S OTHELLO ST, E/O 43RD AVE S
JAMES ST, NE/O 7TH AVE	35TH AVE SW, S/O SW ALASKA ST
MADISON ST, NE/O BOREN AVE	35TH AVE SW, S/O SW MORGAN ST
10TH AVE E, S/O E BOSTON ST	CALIFORNIA AVE SW, S/O ERSKINE WAY SW
12TH AVE E, N/O E JOHN ST	DELRIDGE WAY SW, N/O SW MYRTLE ST
12TH AVE, N/O E YESLER WAY	FAUNTLEROY WAY SW, N/O SW BARTON ST
14TH AVE, N/O E YESLER WAY	FAUNTLEROY WAY SW, S/O SW ALASKA ST
24TH AVE E, N/O E PROSPECT ST	SW BARTON ST, W/O 30TH AVE SW
BOREN AVE, NW/O E YESLER WAY	SW HOLDEN ST, W/O DELRIDGE WAY SW
E ALOHA ST, E/O 10TH AVE E	SW MORGAN ST, W/O 35TH AVE SW
Flow Count Locations, continued	
E CHERRY ST, W/O 26TH AVE	SW ROXBURY ST, E/O 26TH AVE SW

E JOHN ST, E/O BROADWAY E	15TH AVE W, N/O W ARMORY WAY
E MADISON ST, SW/O 38TH AVE E	20TH AVE W, S/O W DRAVUS ST
E MADISON ST, SW/O LAKE WASHINGTON BLVD E	ELLIOTT AVE W, SE/O W MERCER PL
E PIKE ST, W/O BROADWAY	GILMAN AVE W, NW/O W EMERSON PL
E PINE ST, W/O BROADWAY	1ST AVE, NW/O LENORA ST
E UNION ST, W/O 26TH AVE	1ST AVE, SE/O PIKE ST
E YESLER WAY, W/O 23RD AVE	2ND AVE, NW/O LENORA ST
LAKE WASHINGTON BLVD E, NW/O E MADISON ST	2ND AVE, SE/O PIKE ST
M L KING JR WAY E, S/O E JOHN ST	3RD AVE, NW/O LENORA ST
M L KING JR WAY, N/O E YESLER WAY	3RD AVE, SE/O PIKE ST
AURORA AVE N, S/O N 112TH ST	4TH AVE, NW/O LENORA ST
FREMONT AVE N, S/O N 46TH ST	4TH AVE, SE/O PIKE ST
GREENWOOD AVE N, N/O N 107TH ST	5TH AVE, NW/O LENORA ST
GREENWOOD AVE N, S/O HOLMAN RD N	5TH AVE, SE/O PIKE ST
N 130TH ST, W/O ASHWORTH AVE N	6TH AVE, NW/O LENORA ST
N 145TH ST, W/O MERIDIAN AVE N	6TH AVE, SE/O PIKE ST
N 40TH ST, E/O STONE WAY N	7TH AVE, NW/O LENORA ST
N 45TH ST, W/O EASTERN AVE N	7TH AVE, SE/O PIKE ST
N NORTHGATE WAY, W/O ASHWORTH AVE N	8TH AVE, SE/O PIKE ST
NICKERSON ST, NW/O FLORENTIA ST	ALASKAN WAY, SE/O BLANCHARD ST
PHINNEY AVE N, S/O N 65TH ST	ALASKAN WAY, SE/O PIKE ST
STONE WAY N, S/O N 45TH ST	COLUMBIA ST ON RP, NE/O ALASKAN WY VI SB
WESTLAKE AVE N, S/O HIGHLAND DR	DENNY WAY, E/O MINOR AVE
11TH AVE NE, S/O NE 45TH ST	DENNY WAY, E/O WESTLAKE AVE
15TH AVE NE, S/O NE 45TH ST	DENNY WAY, W/O 2ND AVE
15TH AVE NE, S/O NE NORTHGATE WAY	ELLIOTT AV ON RP, NW/O ALASKAN WY VI SB
Flow Count Locations, continued	
35TH AVE NE, N/O NE 75TH ST	I5 COLUMBIA OF, N/O COLUMBIA ST
5TH AVE NE, N/O NE NORTHGATE WAY	I5 JAMES ON, S/O 6TH AVE

5TH AVE NE, S/O NE NORTHGATE WAY	I5 PIKE REV RP, N/O PIKE ST
EAST GREEN LAKE DR N, NW/O LATONA AVE NE	I5 SENECA OF, S/O 6TH AVE
35TH AVE NE, S/O NE 75TH ST	I5 SPRING ON, S/O 6TH AVE
5TH AVE NE, S/O I5 145 OF	I5 UNION OFF, N/O CONVENTION PL
LAKE CITY WAY NE, NE/O NE 95TH ST	I5 UNIVERSITY ON, N/O 6TH AVE
LAKE CITY WAY NE, S/O NE 145TH ST	SENECA ST OFF RP, NE/O ALASKAN WY VI NB
MONTLAKE BR, S/O POINT A	WESTERN AV OFF RP, NW/O ALASKAN WY VI NB
NE 145TH ST, E/O 5TH AVE NE	WESTERN AVE, NW/O UNION ST
NE 45TH ST, W/O NE 45TH PL	E MADISON ST, SW/O 17TH AVE
NE 45TH ST, W/O ROOSEVELT WAY NE	EASTLAKE AVE E, SW/O HARVARD AVE E
NE 50TH ST, W/O ROOSEVELT WAY NE	AURORA AVE N, S/O HARRISON ST
NE 55TH ST, E/O 35TH AVE NE	AURORA AVE N, S/O N 145TH ST
NE 75TH ST, W/O ROOSEVELT WAY NE	AURORA AVE N, S/O N 80TH ST
NE 80TH ST, E/O 5TH AVE NE	AURORA BR, S/O BRIDGE WAY N
NE NORTHGATE WAY, E/O 5TH AVE NE	EAST GREEN LAKE WAY N, NE/O N 57TH ST
NE PACIFIC ST, NE/O 2ND AVE NE	FREMONT BR, S/O POINT A
ROOSEVELT WAY NE, N/O NE 50TH ST	GREENWOOD AVE N, S/O N 145TH ST
ROOSEVELT WAY NE, N/O NE 73RD ST	GREENWOOD AVE N, S/O N 80TH ST
ROOSEVELT WAY NE, SE/O NE 130TH N ST	MERCER ST, W/O FAIRVIEW AVE N
SAND POINT WAY NE, S/O NE 74TH ST	MERIDIAN AVE N, S/O N 145TH ST
15TH AVE NW, S/O NW 80TH ST	N 105TH ST, W/O EVANSTON W AVE N
24TH AVE NW, S/O NW 80TH ST	N 125TH ST, W/O AURORA AVE N
32ND AVE NW, S/O NW 80TH ST	N 130TH ST, W/O LINDEN AVE N
3RD AVE NW, S/O NW 145TH ST	N 145TH ST, W/O LINDEN AVE N
3RD AVE NW, S/O NW 80TH ST	N 46TH ST, W/O PHINNEY AVE N
Flow Count Locations, continued	
8TH AVE NW, S/O NW 80TH ST	N 50TH ST, W/O FREMONT AVE N
BALLARD BR, S/O POINT A	N 65TH ST, W/O LINDEN AVE N
NW MARKET ST, W/O 8TH AVE NW	N 80TH ST, W/O LINDEN AVE N

12TH AVE S, S/O S WELLER ST	N 85TH ST, W/O ASHWORTH AVE N
14TH AVE S, N/O S DIRECTOR ST	N 85TH ST, W/O LINDEN AVE N
15TH AVE S, S/O S BRADFORD ST	QUEEN ANNE AVE N, S/O CROCKETT ST
16TH AVE S, N/O 16TH AVE S BR	UNIVERSITY BR, SW/O POINT A
1ST AV S OFF RP, SE/O ALASKAN WY VI SB	VALLEY ST, W/O FAIRVIEW AVE N
1ST AV S ON RP, SE/O ALASKAN WY VI NB	12TH AVE NE, S/O NE 75TH ST
1ST AVE S, N/O S KING ST	15TH AVE NE, S/O NE 145TH ST
1ST AVE S, S/O S SPOKANE SR ST	15TH AVE NE, S/O NE 65TH ST
23RD AVE S, S/O S JACKSON ST	15TH AVE NE, S/O NE 75TH ST
31ST AVE S, S/O S JACKSON ST	1ST AVE NE, S/O NE 145TH ST
4TH AVE S, N/O S DAWSON ST	25TH AVE NE, S/O NE 47TH ST
4TH AVE S, S/O 2ND AV ET S	25TH AVE NE, S/O NE 75TH ST
51ST AVE S, S/O S BANGOR ST	30TH AVE NE, S/O NE 145TH ST
8TH AVE S, S/O S DIRECTOR ST	16TH AVE SW, N/O SW CAMBRIDGE ST
AIRPORT WAY S, N/O S NORFOLK ST	35TH AVE SW, N/O SW ROXBURY ST
AIRPORT WAY S, NW/O S LUCILE ST	8TH AVE SW, N/O SW ROXBURY ST
ALASKAN WAY S, N/O S KING ST	ALKI AVE SW, W/O HARBOR AVE SW
EAST MARGINAL WAY S, SE/O BOEING DR	BEACH DR SW, SE/O 61ST AVE SW
M L KING JR WAY S, S/O S BRADFORD ST	CALIFORNIA AVE SW, S/O SW CHARLESTOWN ST
M L KING JR WAY S, S/O S NORFOLK ST	DELRIDGE WAY SW, NW/O SW CAMBRIDGE ST
MYERS WAY S, S/O OLSON PL SW	DELRIDGE WAY SW, S/O SW ANDOVER ST
RAINIER AVE S, E/O 75TH AVE S (CITY LIMITS)	OLSON PL SW, SW/O 1ST AVE S
RAINIER AVE S, S/O S OTHELLO ST	SEAVIEW AVE NW, N/O NW 67TH ST
RAINIER AVE S, SE/O BOREN AVE S	SW 106TH ST, W/O SEOLA BEACH DR SW
Flow Count Locations, continued	
RAINIER AVE S, SE/O M L KING JR WAY S	SW ADMIRAL WAY, SE/O SW CITY VIEW ST
RENTON AVE S, SE/O S BANGOR ST	SW AVALON WAY, N/O 30TH AVE SW
S DEARBORN ST, W/O 13TH AVE S	SW BARTON ST, SW/O FAUNTLEROY WAY SW
S GRAHAM ST, E/O SWIFT AVE S	WEST MARGINAL WAY SW, NW/O HIGHLAND PARK WAY SW

S HOLGATE BR, E/O S HOLGATE ST	28TH AVE W, S/O W DRAVUS ST
S JACKSON ST, E/O 5TH AVE S	34TH AVE W, N/O W BARRETT ST
S LANDER ST, W/O 6TH AVE S	MAGNOLIA BR, E/O W GARFIELD ST OFF RP
S LUCILE ST, W/O 12TH AVE S	W DRAVUS ST, E/O 20TH AVE W
S MYRTLE ST, W/O BEACON WR AVE S	W EMERSON PL, SE/O 21ST AVE W
SR99 FY, S/O S CLOVERDALE ST	SWIFT AVE S, NW/O S ALBRO PL

MONTHLY EXPANSION FACTORS

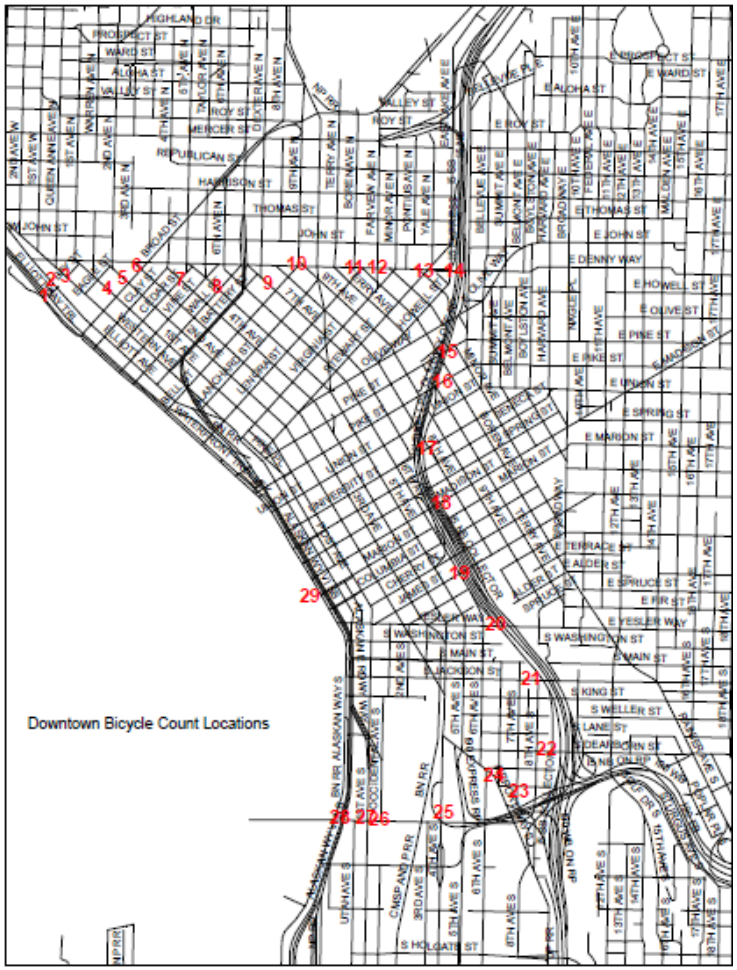
AGGREGATE OF CONTROL COUNT LOCATIONS (Less: WS BR)													
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
	365520	371781	376209	396861	396661	396875	407750	391554	386879	393962	399570	393648	389772
EXP	1.066	1.048	1.036	0.982	0.983	0.982	0.956	0.995	1.007	0.989	0.975	0.990	

CBD EXPANSION FACTORS

AGGREGATE OF ALASKAN WY, DENNY WY, STEWART ST, UNIVERSITY ST AND 3 AVE													
	63968	65716	65020	66554	67560	68126	71466	69220	66339	67150	71876	74174	68097
EXP	1.065	1.036	1.047	1.023	1.008	1.000	0.953	0.984	1.026	1.014	0.947	0.918	

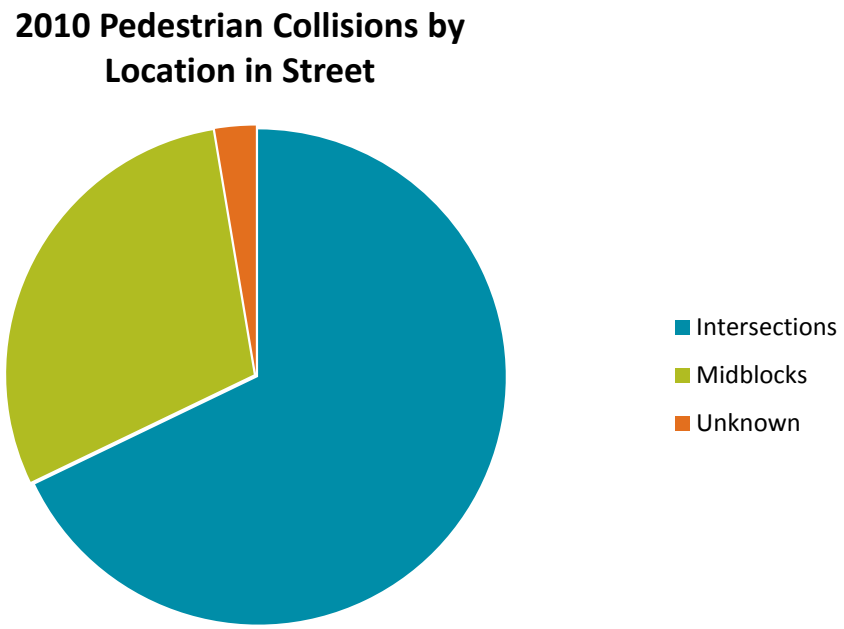
Bridge Count Locations	
1.	Aurora Bridge
2.	Ballard Bridge
3.	Fremont Bridge
4.	Montlake Bridge
5.	Spokane Street Corridor (Duwamish River West Waterway)
6.	West Seattle Bridge (Highrise)
7.	SW Spokane Bridge (Swing)
8.	University Bridge
9.	1 Ave S Bridge
10.	16th Ave S Bridge
11.	1-90 Bridge
12.	SR520 Bridge
13.	I-5 Bridge

Downtown Bicycle Cordon Count Locations



2010 Pedestrian Collision Tables

2010 Pedestrian Collisions by Location in Street		
Location	**Collisions**	**Percent of Total**
Intersections	359	68%
Mid-blocks	156	29%
Unknown	14	3%
Total	**529**	**100%**



2010 Pedestrian Actions during Collisions		
Action	**Number**	**Percent of Total**
Crossing at Intersection with Signal	77	14.6%
Crossing at Intersection - No Signal	51	9.6%
Crossing Midblock No Crosswalk	24	4.5%
Other Actions	19	3.6%
Crossing at Intersection Against Signal	18	3.4%
From Behind Parked Vehicle	15	2.8%
Not in Roadway	7	1.3%
At Intersection Not Using Crosswalk	5	0.9%
Standing or Working in Roadway	5	0.9%
Crossing at Intersection Diagonally	2	0.4%
Crossing Midblock in Crosswalk	2	0.4%
Playing in Roadway	2	0.4%
Fell or Pushed in to Path of Vehicle	1	0.2%
Walking in Roadway	1	0.2%
Walking on Shoulder Opposite Traffic	1	0.2%
Missing Data	299	56.5%
Total	**529**	**100.0%**

2010 Contributing Circumstances for Pedestrians in Collisions

Contributing Circumstance	Number
None noted	165
Did Not Grant Right of Way to Pedestrian	139
Missing	87
Other	55
Did Not Grant Right of Way to Vehicle	22
Disregard Stop Light	17
Failure to Use Crosswalk	16
Under Influence of Alcohol	10
Inattention	7
Exceeding Reasonable and Safe Speed	2
Improper Backing	2
Operating Defective Equipment	2
Disregard Yield Sign	1
Exceeding Speed Limit	1
Apparently Asleep	1
Disregard Stop Sign	1
Disregard Flagger/Officer	1
Grand Total	529

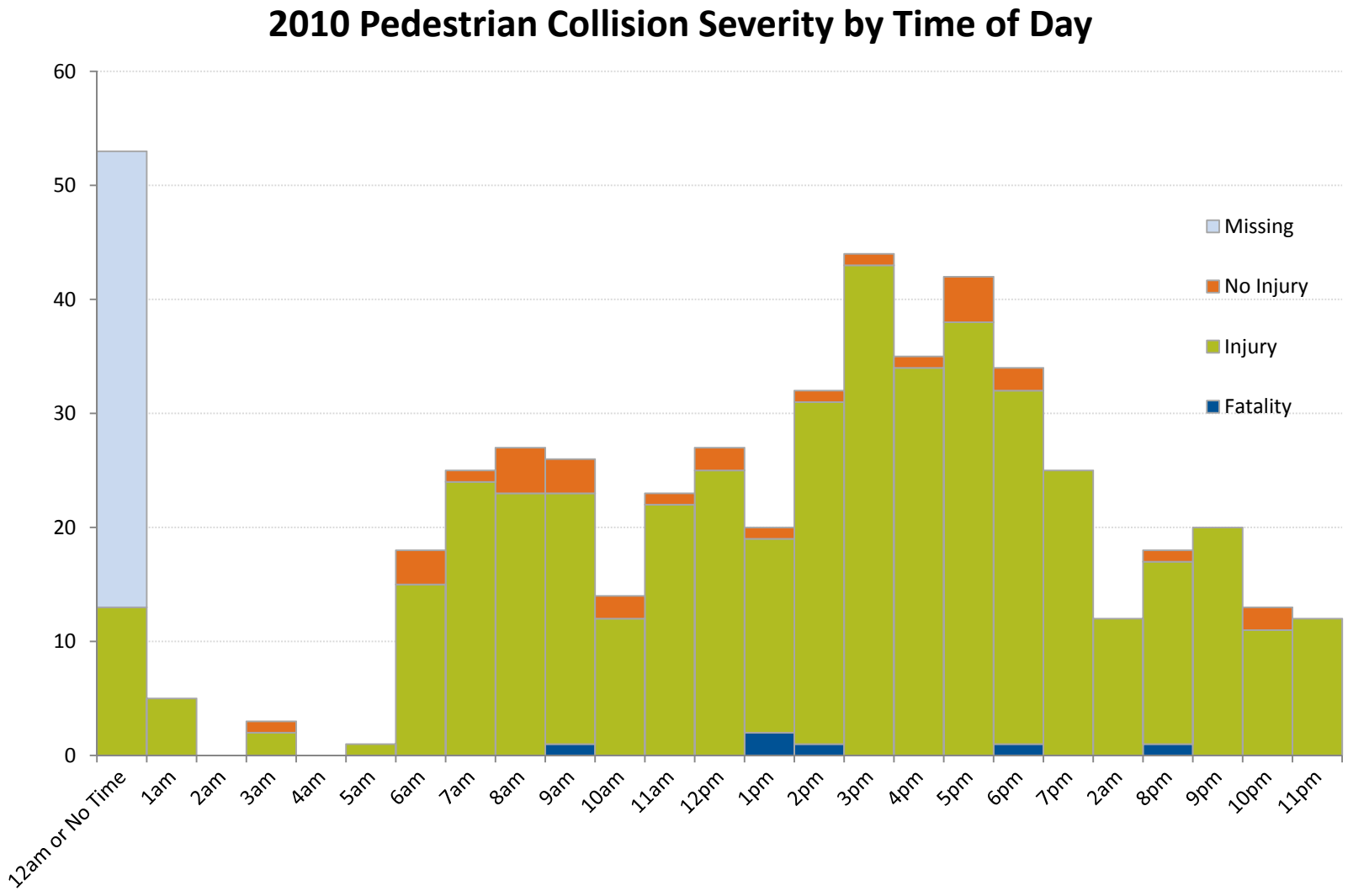
2010 Contributing Circumstances for Drivers in Pedestrian Collisions

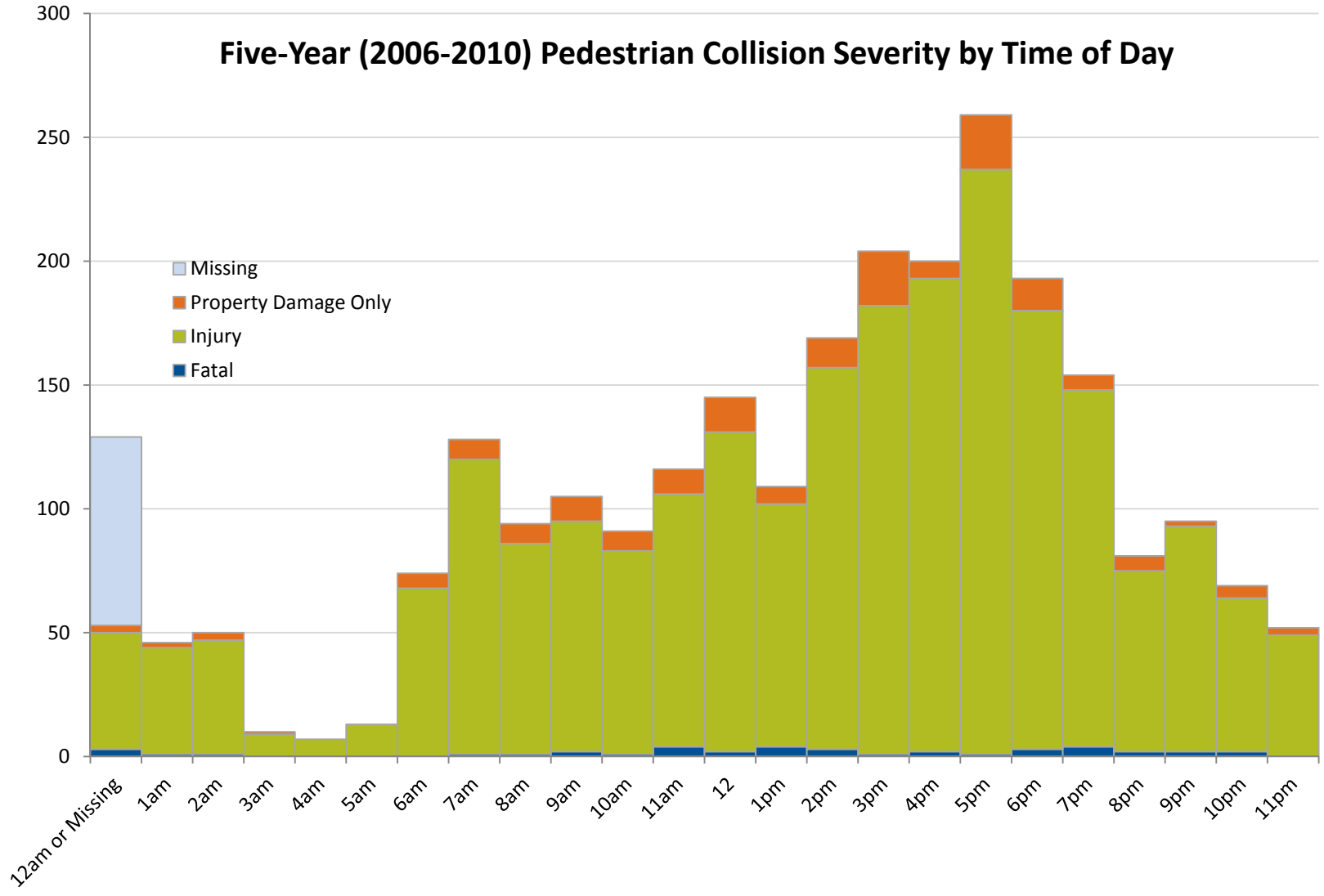
Contributing Circumstance	Number
Did Not Grant Right of Way to Pedestrian	256
None noted	103
Other	46
Inattention	10
Disregard Traffic Signal	9
Under Influence of Alcohol	7
Improper Backing	6
Disregard Flagger/Officer	3
Exceeding Reasonable and Safe Speed	1
Exceeding Speed Limit	1
Did Not Grant Right of Way to Vehicle	1
Apparently Ill	1
Improper Turn	1
Under Influence of Drugs	1
Other Distractions Inside Vehicle	1
Disregard Yield Sign	1
Operating Defective Equipment	1
Grand Total	449

Injury Class of Pedestrian in 2010 Collisions by Age

Age Group	unknown	No Injury	Possible Injury	Non Serious Injury	Serious Injury	Fatality	Non Traffic Fatality	No Data	Total
0 - 4		3	2	2	1				**8**
5 - 14		2	13	13	3				**31**
15 - 24		1	28	36	8				**73**
25 - 34	3	5	44	39	9				**100**
35 - 44	1	1	28	35	6		1		**72**
45 - 54		2	38	27	13	3			**83**
55 - 64		1	24	28	2	1			**56**
65 and over		3	19	13	4	2			**41**
No Age Listed	5	2	32	9	4			39	**91**
Total	**9**	**20**	**228**	**202**	**50**	**6**	**1**	**39**	**555**

2010 Pedestrian Collision Severity by Time of Day					
Hour	**Fatality**	**Injury**	**No Injury**	**Missing**	**Total**
12am or No Time	0	13	0	40	53
1am	0	5	0	0	5
2am	0	12	0	0	12
3am	0	2	1	0	3
4am	0	0	0	0	0
5am	0	1	0	0	1
6am	0	15	3	0	18
7am	0	24	1	0	25
8am	0	23	4	0	27
9am	1	22	3	0	26
10am	0	12	2	0	14
11am	0	22	1	0	23
12pm	0	25	2	0	27
1pm	1	18	1	0	20
2pm	1	30	1	0	32
3pm	0	43	1	0	44
4pm	0	34	1	0	35
5pm	0	38	4	0	42
6pm	1	31	2	0	34
7pm	0	25	0	0	25
8pm	1	16	1	0	18
9pm	0	20	0	0	20
10pm	0	11	2	0	13
11pm	0	12	0	0	12
Total	**5**	**454**	**30**	**40**	**529**


2010 Pedestrian Collision Severity by Time of Day
60
50
40
30
20
10
0
Missing
No Injury
Injury
Fatality
12am or No Time
1am
2am
3am
4am
5am
6am
7am
8am
9am
10am
11am
12pm
1pm
2pm
3pm
4pm
5pm
6pm
7pm
2am
8pm
9pm
10pm
11pm

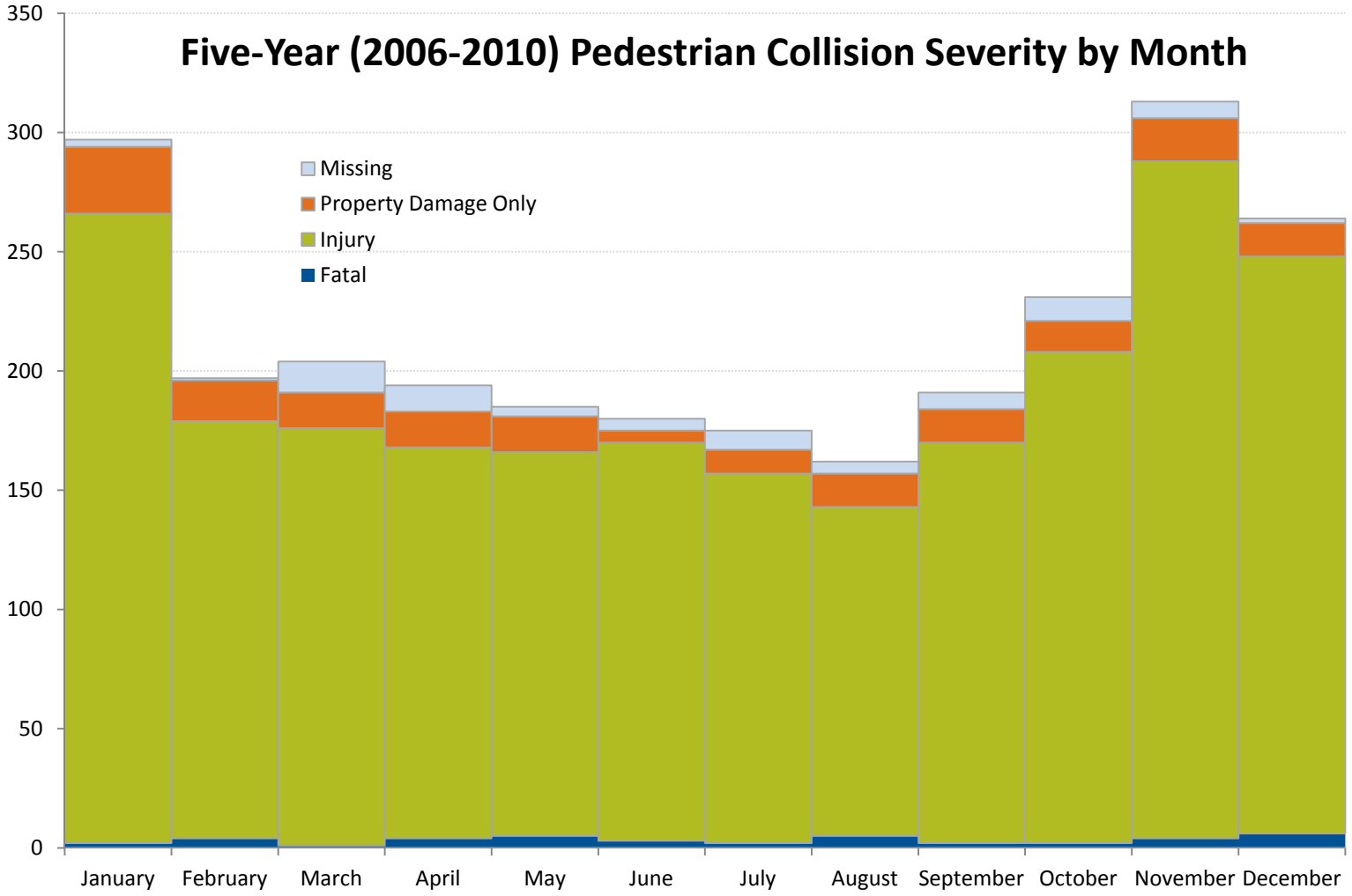

Five-Year (2006-2010) Pedestrian Collision Severity by Time of Day
300
250
200
150
100
50
0
Missing
Property Damage Only
Injury
Fatal
12am or Missing
1am
2am
3am
4am
5am
6am
7am
8am
9am
10am
11am
12
1pm
2pm
3pm
4pm
5pm
6pm
7pm
8pm
9pm
10pm
11pm

2010 Pedestrian Collision Severity by Day of Week

Day of Week	Fatality	Injury	Non Injury	Missing	Total
Sunday	0	44	3	4	51
Monday	3	73	4	7	87
Tuesday	0	71	5	6	82
Wednesday	1	67	4	6	78
Thursday	1	68	5	6	80
Friday	0	78	4	7	89
Saturday	0	53	5	4	62
Total	5	454	30	40	529

2010 Pedestrian Collision Severity by Month

Month	Fatality	Injury	No Injury	Missing	Total
January	1	52	2	2	57
February	0	26	5	0	31
March	0	25	1	11	37
April	0	23	3	7	33
May	2	28	1	2	33
June	0	41	1	2	44
July	0	36	2	2	40
August	0	40	3	2	45
September	0	39	3	5	47
October	0	48	4	3	55
November	1	45	2	3	51
December	1	51	3	1	56
Total	**5**	**454**	**30**	**40**	**529**


Five-Year (2006-2010) Pedestrian Collision Severity by Month
350
300
250
200
150
100
50
0
Missing
Property Damage Only
Injury
Fatal
January
February
March
April
May
June
July
August
September
October
November
December

2010 Pedestrian Collision Severity by Vehicle Action					
Vehicle Action	**Fatality**	**Injury**	**Property Damage Only**	**Missing**	**Total**
Vehicle Going Straight	2	181	11		194
Vehicle Turning Left	2	149	10		161
Vehicle Turning Right		83	6		89
Vehicle Backing	1	17	1		19
Result of Initial Collision		16	2		18
Entering At Angle		5			5
Other Actions		1			1
Not Stated		1			1
Person Fell, Jumped or Pushed		1			1
Missing				40	40
Total	**5**	**454**	**30**	**40**	**529**

2010 Pedestrian Collision Severity by Clothing Visibility					
Clothing Visibility	**Fatality**	**Injury**	**Property Damage Only**	**Missing**	**Total**
Mixed	3	133	11		147
Dark	1	51	7		59
Light		21	2		23
Retro - Reflective		1			1
Missing	1	248	10	40	299
Total	5	454	30	40	529

2010 Pedestrian Collision Severity by Weather Conditions					
Weather	**Fatality**	**Injury**	**Property Damage Only**	**Missing**	**Total**
Unknown		14	6		20
Dry	3	260	12		275
Wet		61	3		64
Snow/Slush	2	114	9		125
Ice		3			3
Sand/Mud/Dirt		1			1
Other		1			1
Missing				40	40
Total	**5**	**454**	**30**	**40**	**529**

2010 Bicycle Collision Tables

Bicycle Collisions by Location in Street	
Location	**Percent of Collisions**
Intersection	59%
Midblock	41%

Bicyclist Actions during 2010 Collisions		
Action	**Total**	**Percent of Total**
Riding with Traffic	118	32%
Crossing or Entering Traffic	67	18%
Turned into Path of Vehicle	8	2%
All Other Actions	5	1%
Riding against Traffic	3	1%
Crossing Diagonally	1	0%
Unknown/Missing	164	45%
Total	**366**	**100%**

Injury Class of Cyclists in 2010 Bike Collisions

Age Group	unknown	No Injury	Possible Injury	Non Serious Injury	Serious Injury	Fatal	Non-Traffic Injury	No Data	Total
5 - 14		2	4	3	2				**11**
15 - 24	1	7	20	47	1				**76**
25 - 34	5	10	26	58	8		1		**108**
35 - 44	1	8	13	27	4	1			**54**
45 - 54		1	11	16	3				**31**
55 - 64		1	10	11	2				**24**
65 and over			1	3	1				**5**
No Age Listed	7	4	12	10	2			22	**57**
Total	**14**	**33**	**97**	**175**	**23**	**1**	**1**	**22**	**366**

Severity of 2010 Bike Collisions by Time of Day

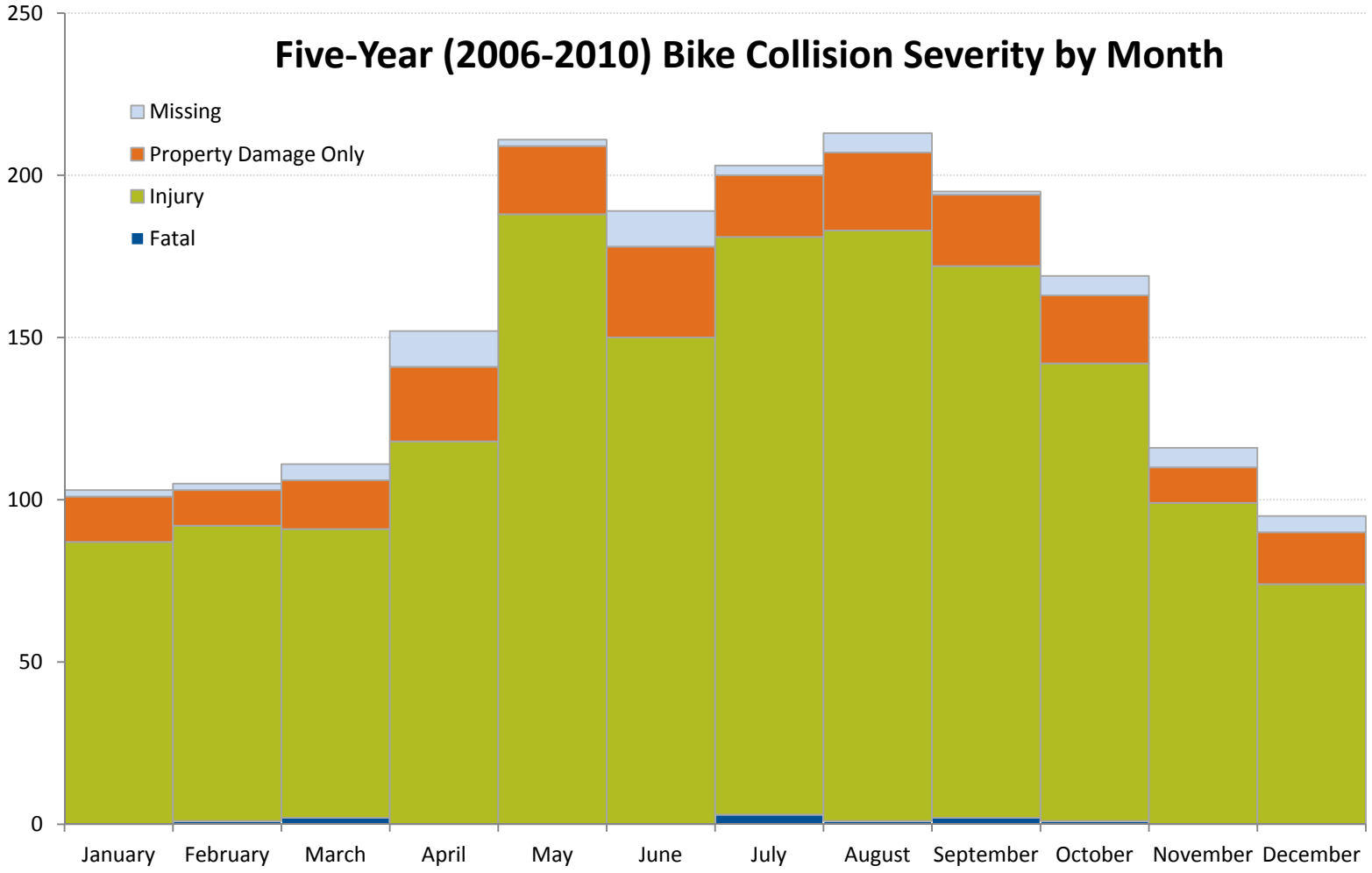
Hour	Injury or Fatality	Property Damage Only	Missing	Total
12am or No Time	2	0	21	23
1am	3	0	0	3
2am	4	0	0	4
3am	0	0	0	0
4am	0	0	0	0
5am	3	0	0	3
6am	2	0	0	2
7am	16	2	0	18
8am	26	5	0	31
9am	10	1	0	11
10am	13	3	0	16
11am	10	3	0	13
12pm	13	3	0	16
1pm	15	3	0	18
2pm	16	3	0	19
3pm	27	3	0	30
4pm	34	5	0	39
5pm	32	5	0	37
6pm	28	2	0	30
7pm	13	2	0	15
8pm	13	1	0	14
9pm	12	1	0	13
10pm	4	1	0	5
11pm	6	0	0	6
Total	**302**	**43**	**21**	**366**

Severity of 2010 Bike Collisions by Day of Week

Day of Week	Injury or Fatality	Property Damage Only	Missing	Total
Sunday	25	3	1	29
Monday	42	2	2	46
Tuesday	52	8	2	62
Wednesday	61	9	3	73
Thursday	41	10	4	55
Friday	45	7	5	57
Saturday	36	4	4	44
Total	**302**	**43**	**21**	**366**

Severity of 2010 Bike Collisions by Month

Month	Injury or Fatality	Property Damage Only	Missing	Total
January	13	2	1	16
February	22	3	0	25
March	17	2	3	22
April	16	5	10	31
May	38	1	0	39
June	31	5	1	37
July	39	3	0	42
August	31	6	1	38
September	35	5	0	40
October	28	6	1	35
November	13	2	3	18
December	19	3	1	23
Total	**302**	**43**	**21**	**366**


Five-Year (2006-2010) Bike Collision Severity by Month
Missing
Property Damage Only
Injury
Fatal
250
200
150
100
50
0
January
February
March
April
May
June
July
August
September
October
November
December

Severity of 2010 Bike Collisions by Facility Type

Facility Type	Fatality	Injury	Property Damage Only	Missing	Total
Roadway		97	15		112
Designated Bike Route	1	31	6		38
Marked Crosswalk		21	3		24
Unmarked Crosswalk		12	4		16
Shoulder		9			9
Sidewalk		3	1		4
Missing		128	14	21	163
Total	**1**	**301**	**43**	**21**	**366**

Severity of 2010 Bike Collisions by Clothing Visibility

Clothing	Fatality	Injury	Property Damage Only	Missing	Total
Mixed	1	107	14		122
Dark		34	8		42
Light		15	5		20
Retro - Reflective		14	1		15
Other Reflective Apparel		3			3
Missing		128	15	21	164
Total	**1**	**301**	**43**	**21**	**366**

Severity of 2010 Bike Collisions by Weather

Weather	Fatality	Injury	Property Damage Only	Missing	Total
Clear or Partly Cloudy	1	213	25		239
Overcast		43	4		47
Raining		37	6		43
Unknown		8	8		16
Missing				21	21
Total	**1**	**301**	**43**	**21**	**366**

Contributing Circumstance for Drivers in 2010 Bicycle Collisions	
Driver Contributing Circumstance	**Collisions**
Did Not Grant Right of Way to Bicycle	142
None	61
Other	31
Did Not Grant Right of Way to Vehicle	8
Inattention	6
Disregard Traffic Signal	5
Improper U-Turn	5
Disregard Stop Sign	3
Under the Influence of Alcohol	1
Exceeding Reasonable and Safe Speed	1
Disregard Yield Sign	1
Improper Signal	1
Improper Backing	1
Unknown/Missing	100
Total	**366**

Contributing Circumstance for Bicyclists in Collisions	
Contributing Circumstance	**Total**
None	141
Did not Grant Right of Way to Pedestrian	66
Other	32
Did not Grant Right of Way to Vehicle	22
Disregard Traffic Signal	15
Inattention	10
Exceeding Reasonable and Safe Speed	8
Improper Passing	6
Disregard Stop Sign	5
On Wrong Side of Road	4
Improper U-Turn	3
Under the Influence of Alcohol	2
Operating Defective Equipment	2
Following Too Closely	1
Failing to Signal	1
Improper Turn	1
Disregard Yield Sign	1
Headlight Violation	1
Missing	45
Total	**366**

Updated 2010 Fatalities Table

No.	Location	Date	Type	Age	Sex
1	Aurora Ave N & N Phinney Way	01/28/10	Pedestrian	47	M
2	16th Ave SW between SW Orchard St and SW Othello St	03/09/10	Ran off Road	44	M
3	Rainier Ave S between S Lucile St and S Findlay St	03/13/10	Head on	25	M
4	SW Admiral Way between 36th Ave SW and 37th E Ave SW	03/21/10	Head on	29	M
5	NW 54th St between NW Market St and 30th WR Ave NW	04/04/10	Ran off Road	20	M
6	NW 54th St between NW Market St and 30th WR Ave NW	04/05/10	Ran off Road	19	M
7	NW 54th St between NW Market St and 30th WR Ave NW	04/06/10	Ran off Road	20	M
8	Olson Pl SW between 3rd Ave SW and SW Cambridge Pl	04/21/10	Head on	66	M
9	16th Ave and E Jefferson St	05/03/10	Pedestrian	51	F
10	Harvard Ave N between E Thomas St and E Harrison St	05/03/10	Pedestrian	91	F
11	24th Ave NE between Lake City Way NE and NE Northgate Way	05/30/10	Ran off Road	27	M
12	Aurora Ave N between Garfield St and Howe St	05/31/10	Ran off Road	23	M
13	Airport Way S between S Othello St and Military Rd S	08/17/10	Left Turn	51	M
14	Westlake Ave N between Halladay St and Newell St	09/03/10	Ran off Road	30	M
15	1st Ave S Off Ramp between Alaskan WY Viaduct SB and 1st Ave S	09/10/10	Ran off Road	53	M
16	15th Ave NW between NW 73rd St and NW 75th St	10/21/10	Rear End	37	M
17	7th Ave and Cherry St	11/17/10	Pedestrian	80	F
18	2nd Ave and Bell St	12/27/10	Pedestrian	48	F
20	NE 43rd St and Brooklyn Ave NE	12/17/10	Pedestrian	62	F

Glossary

TRAFFIC VOLUME TERMS

Source – William R. McShane and Roger P. Roess, *Traffic Engineering* (Englewood Cliffs, New Jersey: Prentice Hall, 1990) 49.

ADT: Average Daily Traffic. An average 24-hour traffic volume at a given location for some period of time less than a year.
AWDT: Average Weekday Daily Traffic. An average 24-hour traffic volume occurring on weekdays for some period of time less than one year, such as for a month or a season.
AADT: Average Annual Daily Traffic. The average 24-hour traffic volume at a given location over a full 365-day year.

INJURY TYPES

Source – State of Washington Police Traffic Collision Report Instruction Manual and SDOT

No Injury: Applies when the officer at the scene has no reason to believe that, at the time of the collision, the person received any bodily harm due to the collision.
Possible Injury: Any injury reported to the officer or claimed by the individual such as momentary unconsciousness, claim of injuries not evident, limping, complaint of pain, nausea, hysteria, etc. These are counted as injuries when the total number of injuries is presented.
Non Serious Injury: Any injury other than fatal or disabling at the scene, including broken fingers or toes, abrasions, etc.
Serious Injury: This refers to any injury that results in at least a temporary impairment, e.g. a broken limb. It does not mean that the collision resulted in a permanent disability.
Fatality: This category includes persons who died at the scene of the collisions, were dead on arrival at the hospital, or died within 30 days of the collision from collision-related injuries.

ROADWAY CLASSIFICATION TYPES

Source – City of Seattle Comprehensive Plan, Section 3.4 and SDOT

Residential (Non-Arterial) Streets: Roadways that provide localized traffic circulation, including access to neighborhood land uses, commercial and industrial land uses, and access to higher level traffic streets.
Collector Arterials: Roadways that collect and distribute traffic from principal and minor arterials to local access streets or provide direct access to destinations.
Minor Arterials: Roadways that distribute traffic from principal arterials to collector arterials and access streets.
Principal Arterials: Roadways that are intended to serve as the primary routes for moving traffic through the city, connecting urban centers and urban villages to one another, or to the regional transportation network.

The Seattle Department of Transportation
700 5th Avenue, Suite 3800
PO Box 34996
Seattle, WA 98124-4996
(206) 684-ROAD
www.seattle.gov/transportation

making a DIFFERENCE

In order to minimize printing costs and reduce paper use, a limited number of copies were printed on recycled paper.

This report is available to view at:
http://www.seattle.gov/transportation/reports.htm

SDOT
Seattle Department of Transportation