

San Francisco 2008 Collisions Report



SFMTA

Municipal Transportation Agency

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City and County of San Francisco
San Francisco Municipal Transportation Agency
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EXECUTIVE SUMMARY

- Non-fatal injury collisions totaled 3,010 in 2008. These figures are relatively unchanged from the 2007 total of 3,021 non-fatal injury collisions. This was the second lowest injury total over the past 10 years.
- Fatal collisions totaled 27 in 2008. This figure is lower than the 2007 total of 42 fatal collisions and one of the lowest in 90 years. Of these fatal collisions, 12 were from a motor vehicle involved with a pedestrian and three with a bicyclist.
- For 2008, 32 percent of non-fatal injury collisions were broadsides, while 23 percent were vehicle-pedestrian collisions.
- Unsafe speed is listed as a primary cause in 19 percent of non-fatal injury collisions last year.
- There were 468 injury collisions in 2008 involving bicyclists, up slightly from the 451 total recorded in 2007. The 2008 bicycle injury collision total is the highest in the past ten years.
- The 2008 total of 799 injury collisions involving a pedestrian as a party is almost the same as the figure of 796 injury collisions reported in 2007.
- The San Francisco Municipal Transportation Agency (SFMTA) has taken and will continue to take a variety of measures to address highest collision intersections and other safety concerns.

**Photo 1: 25th Avenue traffic calming project
(March 2008)**



Photo 2: 25th Avenue before project



SAFER STREETS FOR SAN FRANCISCO

San Francisco has made progress in reducing injury traffic collision totals in the past two decades. In 1990 San Francisco reported a total of 5,804 injury collisions and 64 fatal collisions. By 2008 those totals had declined to 3,010 injury and 27 fatal collisions. While there are many factors that affect urban collision totals over time, some credit can be given to specific actions that the City has taken to improve roadway safety. Below we highlight a few of these safety initiatives.

Signal Upgrades. In 1989 San Francisco voters approved a half-cent transportation sales tax¹ which included funding for signal improvements at San Francisco's highest collision intersections (Figure 1A, 1995-1997). South of Market streets like Bryant, Folsom, Harrison and Howard saw their collision totals drop by 40 to 60 percent in the late 1990's after new pedestrian and larger, more visible overhead signals were installed, helping remove many South of Market intersections from annual highest collision lists (Figure 1B, 2005-2007). Similar signal upgrades recently include 19th Avenue, Lombard Street, Mission Street, and Park Presidio Boulevard.

Pedestrian Countdown Signals. San Francisco was one of the first major cities to replace its pedestrian signals with LED units that had a countdown display. The positive results from these early deployment efforts have led the federal government to consider requiring these devices at all signalized crosswalks. The SFMTA continues to work on installing countdown units at older signals that lack them (about 30 percent).

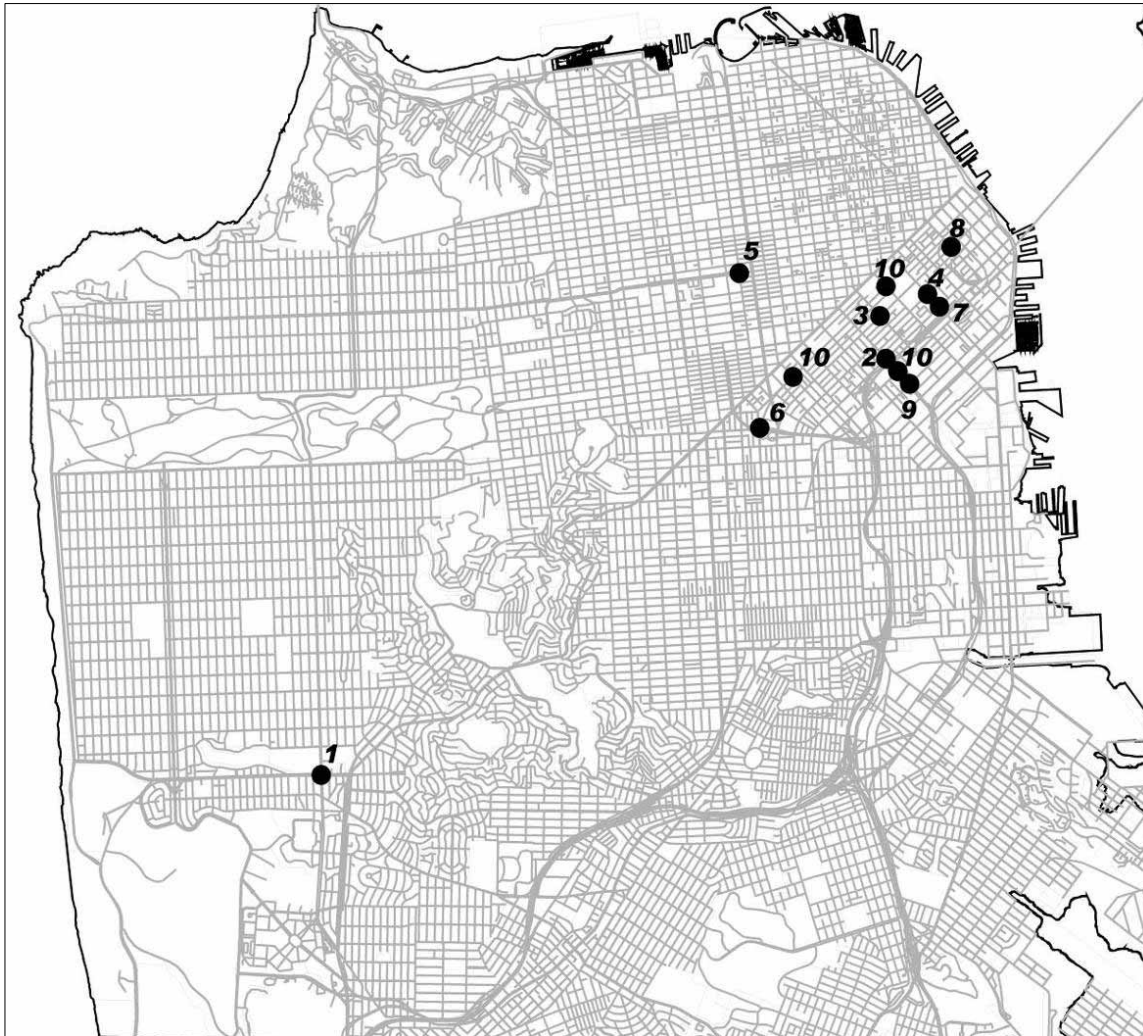
Signal Timing Changes. Transportation engineers are continually updating signal timing settings. After State guidelines were revised in the mid 1990's, for example, yellow lights were lengthened at over 1,000 intersections. SFMTA has also revised its signals to provide additional time for pedestrians to cross streets and to provide additional all-red clearance phases, brief periods when signal approaches are red in all directions.

New Safety Programs. The past two decades have seen the development of new and stronger bicycle, pedestrian, traffic calming, and school safety programs in San Francisco. These programs have leveraged local, state, and federal funds to implement a variety of street improvement projects, from traffic calming projects on major arterials (such as the traffic lane changes on 25th Avenue pictured on previous page) to improved markings at all school crossings.

There is much work that remains to be done. Total, bicycle, and pedestrian injury collisions are no longer falling at the pace they did in previous years. Concerted action to make San Francisco's streets safer is still required.

¹ The transportation sales tax, administered by the San Francisco County Transportation Authority, was renewed by voters in 2003 (Proposition K) to continue until 2033.

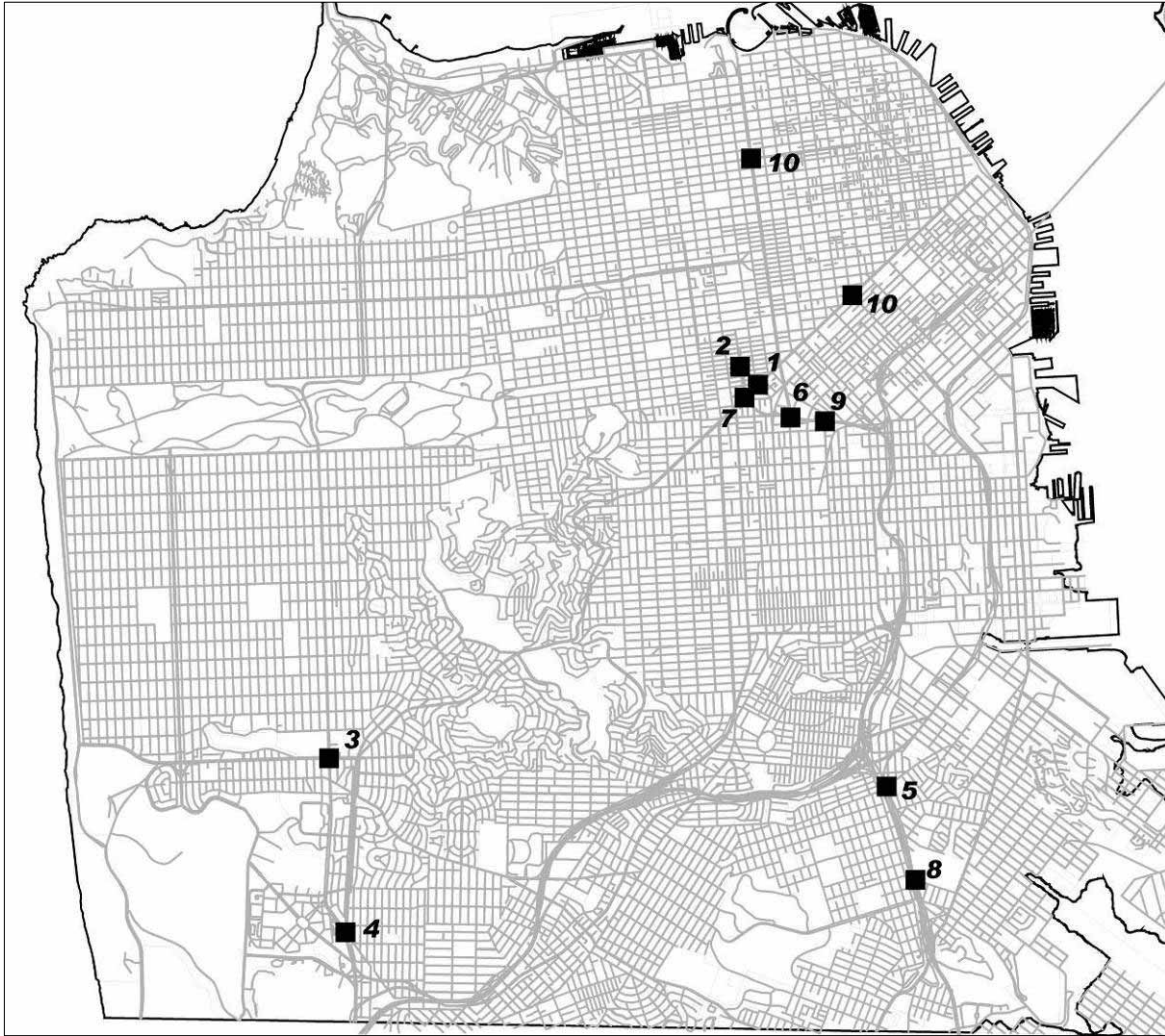
**FIGURE 1A (Historical Comparison)
Ten Highest Injury Collision Intersections for 1995-1997**



- 1. 19th Avenue and Sloat Boulevard (44 reported injury collisions)
- 2. 6th Street and Bryant Street (39)
- 3. 5th Street and Howard Street (39)
- 4. 3rd Street and Folsom Street (37)
- 5. Franklin Street and Geary Boulevard (31)
- 6. Duboce Avenue and Mission Street (31)
- 7. 3rd Street and Harrison Street (30)
- 8. 1st Street and Howard Street (30)
- 9. 6th Street and Brannan St (30)
- 10. 6th Street and Harrison Street (28)
- 10. 10th Street and Mission Street (28)
- 10. 4th Street and Mission Street (28)

For the period 1995-1997 the highest injury intersections had three-year collision totals between 28 and 44 and were concentrated in South of Market.

**FIGURE 1B (Historical Comparison)
Ten Highest Injury Collision Intersections for 2005-2007**



1. Gough Street and Market Street (26 reported injury collisions)
2. Oak Street and Octavia Boulevard (23)
3. 19th Avenue and Sloat Boulevard (21)
4. 19th Avenue and Junipero Serra (20)
5. Bayshore Boulevard and Silver Avenue (20)
6. 13th Street and South Van Ness Avenue (19)
7. Market Street and Octavia Boulevard (17)
8. Bayshore Boulevard and Paul Avenue (17)
9. 13th Street and Harrison Street (16)
10. 6th Street and Market Street (16)
10. Broadway and Van Ness Avenue (16)

Ten years later, highest injury intersections for 2005-2007 had three-year collision totals between 16 and 26, a significant drop.

ABOUT THIS REPORT

This report is prepared every year by the SFMTA in order to identify long-term collision trends and intersections with the highest collision totals. This information is used to identify locations that may need special attention and evaluate previous mitigation measures. The intersections in this report are not a list of the "most dangerous" intersections in San Francisco. Vehicular traffic and pedestrian activity play a key role in determining collision totals: the more people that use an intersection, the more likely a collision can occur there. Some of the locations in this report are also some of San Francisco's busier intersections. Short-term annual increases in collisions at any one intersection can also be the result of random yearly variations. Out of the thousands of intersections in San Francisco, in any one year some will have more or fewer collisions than the expected annual average. Focusing on at multi-year trends can help reduce confusion caused by these statistical fluctuations.

The source of the collision data is the Statewide Integrated Traffic Records Systems (SWITRS) maintained by the California Highway Patrol (CHP). California Vehicle Code Section 20008 requires that local governments send their police collision reports to the State. The CHP enters this data into database files which are then processed by SFMTA. State SWITRS totals for 2008 were not considered official by the CHP until October of 2009, thus delaying the preparation of this report. The data used in this report excludes collisions that occurred on San Francisco freeways, in the Presidio, or on private property. It includes collisions on city streets that are classified as state highways (such as 19th and Van Ness avenues).

Due to limited police staff resources, property damage only (non-injury) collisions are generally underreported in San Francisco. Injury and fatal collisions have been reported more consistently over time and are thus the focus of this report. Unless otherwise stated, the term "injury collisions" in this report also includes fatal collisions.



Photo 3: San Francisco Police Department enforcement

PART 1: CITYWIDE INJURY AND FATAL COLLISION TRENDS

Reported non-fatal injury collisions in San Francisco totaled 3,010 in 2008. This figure is the second lowest injury collision total of the past 10 years (Figure 2). 2008’s total was for the most part unchanged from that of 2007, when 3,021 injury collisions were reported. While injury collisions steadily declined until 2004, annual totals have remained relatively unchanged since then.

The number of collisions resulting in fatalities in 2008, 27, was a 36 percent drop from the total of 42 in 2007 (Figure 3). The fatalities total was the second lowest total of the past 90 years (Appendix A). In general, injury collisions are a more reliable indicator of collision trends because fatal collisions, being fewer in number, are subject to sharper fluctuations from year to year. This is illustrated in the higher annual variance seen in Figure 3 compared to Figure 2. After 2004 annual fatal collision totals below 30 have started being more common, a possible indication of an improving trend.

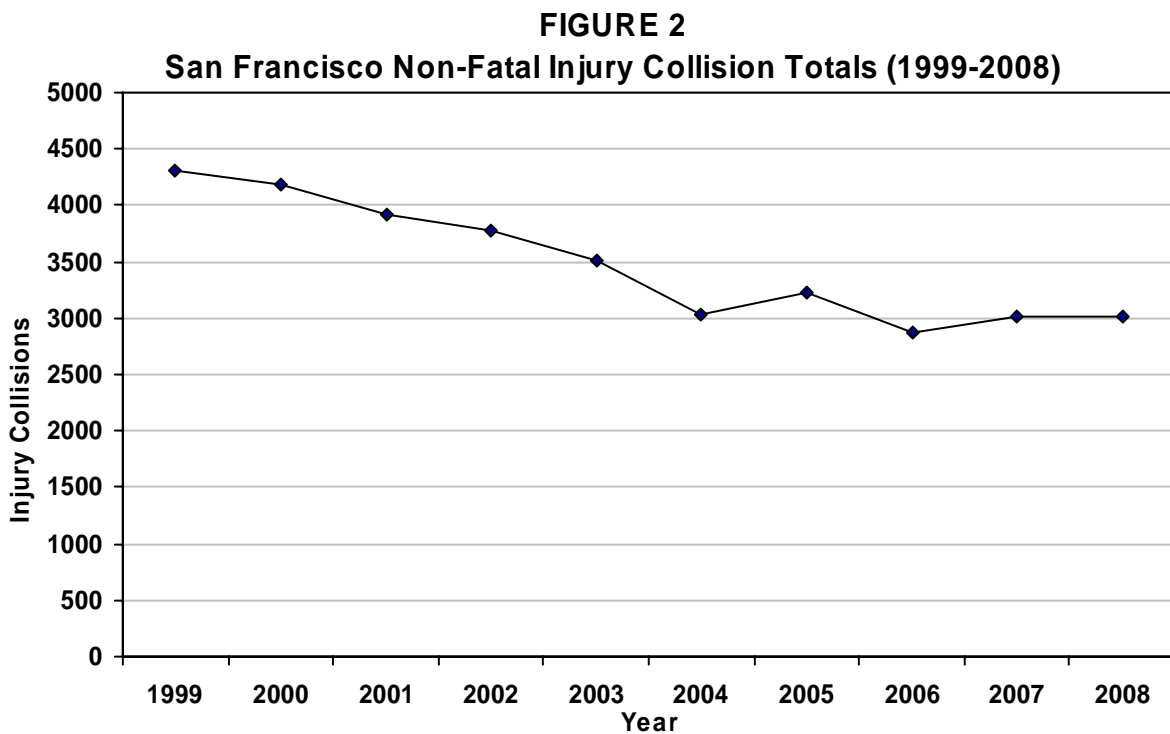


Figure 2: San Francisco Non-Fatal Injury Collision Totals (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	4,304	4,182	3,917	3,777	3,511	3,038	3,227	2,869	3,021	3,010

FIGURE 3
San Francisco Fatal Collision Totals (1999-2008)

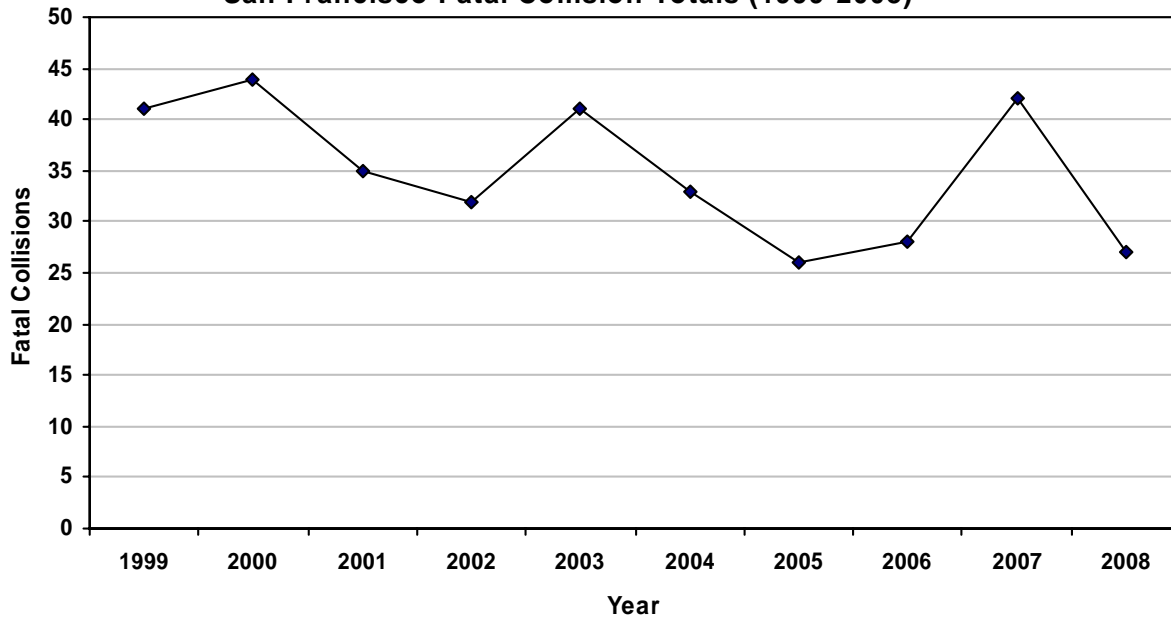


Figure 3: San Francisco Fatal Collision Totals (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	41	44	35	32	41	33	26	28	42	27

Table 1 lists the previous five-year injury collision totals according to the three non-fatal injury severity categories used by all police departments in the state. The percentage of visible plus severe injuries has been increasing slightly over the past five years, going from 34 percent of the injury total in 2004 to 37 percent in 2008.

TABLE 1
San Francisco 2004-2008 Injury Collision Severity
(With percentage of annual total injury collisions)

Year	Complaint of Pain	Other Visible Injury	Severe Injury
2008	1,889 (63%)	941 (31%)	180 (6%)
2007	1,937 (64%)	896 (30%)	188 (6%)
2006	1,895 (66%)	807 (28%)	167 (6%)
2005	2,118 (66%)	936 (29%)	173 (5%)
2004	2,006 (66%)	882 (29%)	150 (5%)

PART 2: COLLISION TYPES AND CAUSES

Tables 2 and 3 break down injury collision totals by primary collision type and cause. The two most common types of collisions, broadsides and vehicle-pedestrian, together comprise 55 percent of injury collisions. The top primary collision cause is generally determined to be speeding, but collisions can be the result of more than one cause.

**TABLE 2
2008 Non-Fatal Injury Collisions by Primary Collision Type (Total of 3,010)**

Type	Collisions	Percent
Broadside (Right-Angle)	941	32
Vehicle-Pedestrian	703	23
Rear-End	500	16
Sideswipe	350	12
Head-On	142	5
Other	374	12

**TABLE 3
2008 Non-Fatal Injury Collisions by Primary Collision Cause (Total of 3,010)**

Cause	Collisions	Percent
Unsafe Speed	571	19
Violation of Traffic Signals and Signs	452	15
Vehicle Right-of-Way Violations	349	12
Driver Violations of Pedestrian Right-of-Way	318	11
Violations by the Pedestrian	244	8
Improper Turning	241	8
Other	835	28

Figure 4 illustrates the trend in broadside (right-angle) injury collisions and injury collisions resulting from violation of California Vehicle Code Section 21453(A), failure by a motorist to obey red light signal indication. 2008 recorded one of the lowest broadside and red light violation injury collision totals of the past ten years. Signal hardware and timing improvements described in this report appear to have helped reduce these types of collisions at certain intersections. This decrease also coincides with the city’s deployment of red light photo enforcement starting in 1997 and other efforts aimed at reducing the incidences of red light running.

FIGURE 4
San Francisco Injury Broadside and Injury Red Light Violation Collisions (1999-2008)

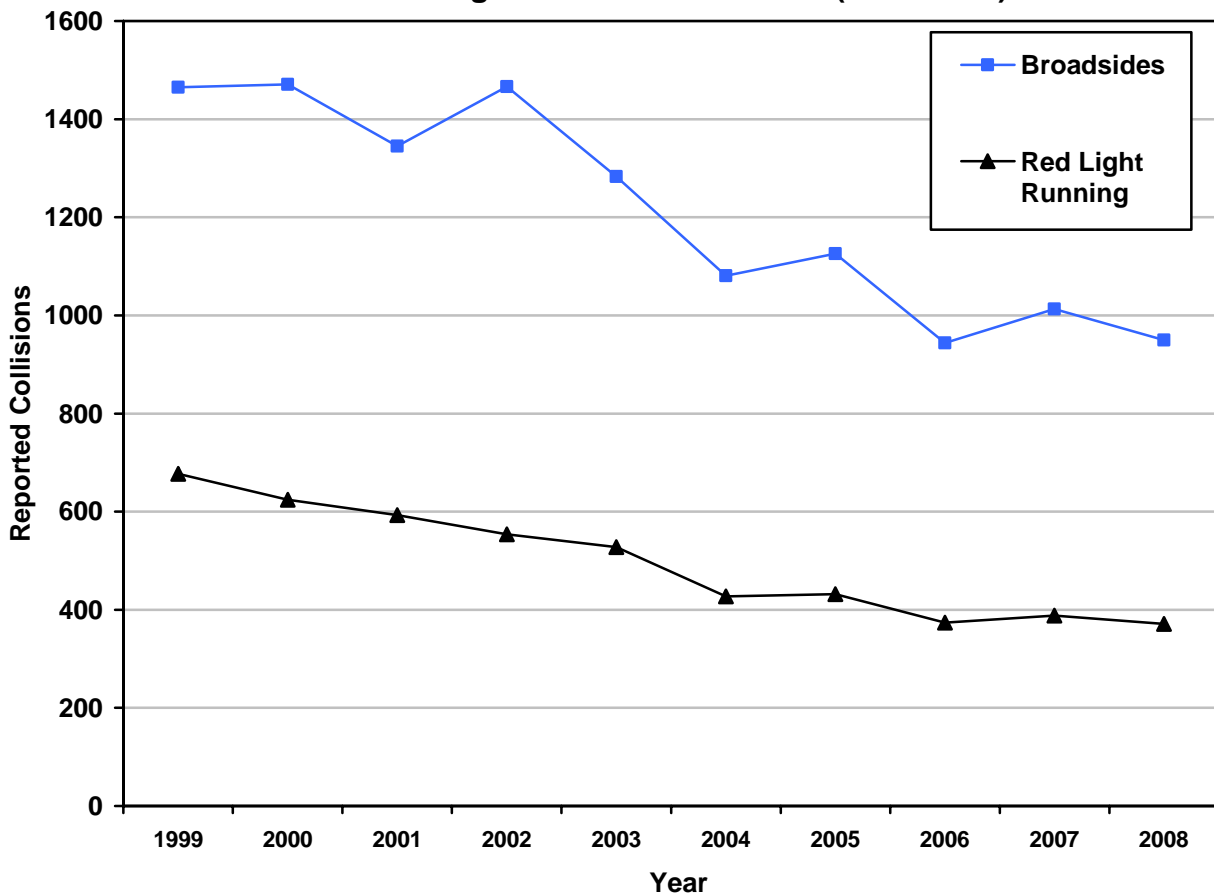


Figure 4: San Francisco Injury Broadside and Injury Red Light Collisions (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total Broadside	1465	1471	1345	1466	1283	1081	1126	944	1013	950
Total Red Light Running	677	624	593	554	528	427	432	374	388	371

PART 3: HIGHEST COLLISION INTERSECTIONS

The majority of injury collisions in San Francisco occur at intersections. In 2008, nearly 70 percent of injury collisions (2,067) were collisions at or within a few feet of an intersection. As documented in previous annual reports, the number of intersections with double digit annual injury collision totals has decreased, thanks in part to San Francisco's targeted safety efforts. Table 4 lists the locations with the most collisions reported during 2008 (seven or more collisions resulting in injury to at least one party). Appendix B shows the highest collision intersections since 1995 for historical reference.

TABLE 4
2008 Highest Injury Collision Total Intersections
Intersections with 7 or more collisions resulting in injury during 2008

Street A	Street B	2007 Injury Collisions	2008 Injury Collisions	Change
Market Street	Octavia Boulevard	8	9	+1
16 th Street	Guerrero Street	1	8	+7
6 th Street	Howard Street	7	8	+1
Essex Street	Harrison Street	5	8	+3
Park Presidio Boulevard	Lake Street	3	8	+5
6 th Street/Market	Taylor/Golden Gate	8	7	-1
16 th Street	Harrison Street	2	7	+5
16 th Street	Mission Street	8	7	+1
California Street	Van Ness Avenue	2	7	+5
Fell Street	Van Ness Avenue	2	7	+5
Market Street	Valencia Street	1	7	+6
Masonic Avenue	O'Farrell/Anza	4	7	+3
Turk Street	Webster Street	2	7	+5

The 2008 highest collision location, Market Street and Octavia Boulevard, has had an above average number of bicycle-involved collisions since 2005. The majority of these collisions are caused by illegal right turns from eastbound Market Street to the Central Freeway on-ramp. In 2008 there were six reported bicycle-involved collisions, five of them occurring during the first half of the year. This intersection is one of the highest collision intersections during the past three years for bicycle-involved collisions.

The nearby intersection of Market and Valencia streets recorded the highest bicycle-involved collision total last year. All seven injury collisions in 2008 involved a bicyclist, with six of these collisions involving an eastbound cyclist and an eastbound right turning vehicle. SFMTA Bicycle Program staff is reviewing this location. Bicycle Program staff has also reviewed the pattern of collisions at 16th and Guerrero streets, which in 2008 had five bicycle-involved injury collisions. Unlike Market and Valencia Streets, however, no immediate pattern was evident at 16th and Guerrero Streets.

The collisions trends at 6th and Howard streets, 6th and Market streets, Lake Street and Park Presidio Boulevard, and Essex and Harrison streets are discussed in more detail in the next section of the report.

A full signal upgrade was completed at 16th and Harrison streets in March of 2009, which included the installation of new overhead mast arms and pedestrian signals. A timing change extending pedestrian clearance phases was completed in 2009 at the intersection of 16th and Mission streets. The Mission Street signal upgrade project (completed in 2008) also made improvements at this intersection.

Fell and California Streets at Van Ness Avenue both saw large percentage increases in their collision totals. Signal timing was adjusted at California Street and Van Ness Avenue to add longer all-red phases in 2009. Pavement markings at Fell Street and Van Ness Avenue were repainted in 2009. Both signals are planned to be fully upgraded as part of the Van Ness Avenue Bus Rapid Transit project now under study.

Signal timing and parking changes were completed at Anza Street, O'Farrell Street and Masonic Avenue in 2008 to improve the operation of this intersection. Further changes are contemplated that will require signal upgrade and construction funding. The SFMTA will install larger signal heads at Turk and Webster streets to reduce the incidence of broadsides. An all-red signal clearance phase was added in 2007.

Table 5 is a list of the highest injury collision intersections for the most recent three-year period, 2006-2008. This extended analysis period identifies locations that have had cumulative higher totals, reducing the effect of statistical anomalies (such as regression to the mean).

**TABLE 5
Three-Year Highest Injury Collision Intersections, 2006-2008
Intersections with 16 or more injury collisions**

Street A	Street B	2006-2008 Injury Collisions	2003-2005 Injury Collisions	Three Year Change
Oak Street	Octavia Boulevard	25	4	+21
Market Street	Octavia Boulevard	22	6	+16
6 th Street/Market	Taylor/Golden Gate	20	8	+12
Bayshore Boulevard	Silver Avenue	19	20	-1
19 th Avenue	Sloat Boulevard	19	20	-1
13 th Street	S. Van Ness Avenue	19	15	+4
6 th Street	Howard Street	18	15	+3
19 th Avenue	Junipero Serra Boulevard	18	14	+4
Gough Street	Market Street	18	23	-5
Park Presidio Boulevard	Lake Street	16	8	+8
Essex Street	Harrison Street	16	4	+12

Same as for the period 2005-2007 (Figure 1B), there were eleven intersections for 2006-2008 that had 16 or more injury collisions (or an average of more than five injury collisions a year). Figures 5 through 15 describe the ten-year collision pattern for these intersections, showing rising or falling collision frequency. Predominant collision patterns and recommended actions are described in more detail. SFMTA staff will continue to monitor all these intersections.

Oak Street and Octavia Boulevard

2006-2008 injury collisions: 25

Primary Pattern: Eastbound Oak Street and northbound Octavia Boulevard broadsides.

Engineering Changes: Intersection was completely redesigned as part of Octavia Boulevard project (2003-2005). SFMTA modified traffic signal indications facing Oak Street in April of 2007 to minimize Oak Street red light running. New red right cameras at intersection are already constructed and awaiting activation.

Collision Trend: Annual collision totals declined significantly in 2008. 2008 recorded a lower injury collision total than 2001, for example, a time when the intersection had less traffic than it does now.

FIGURE 5
Oak Street and Octavia Boulevard, Injury Collisions (1999-2008)

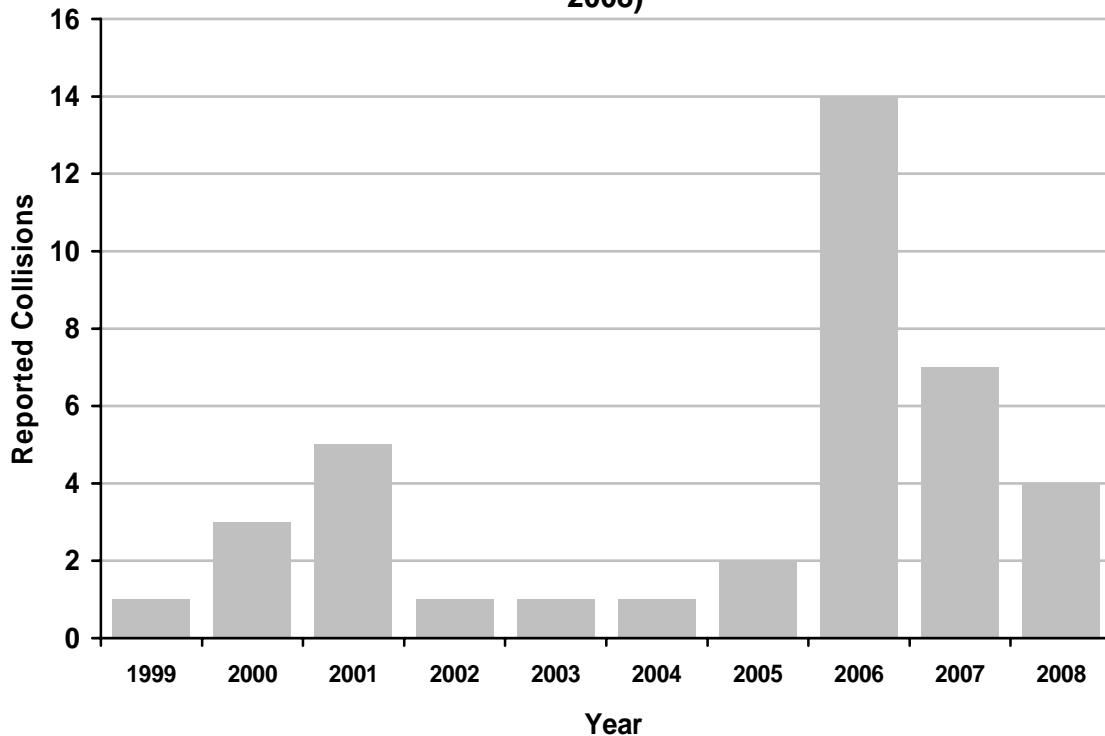


Figure 5: Oak Street and Octavia Boulevard, Injury Collisions (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	1	3	5	1	1	1	2	14	7	4

Market Street and Octavia Boulevard

2006-2008 injury collisions: 22

Primary Pattern: Eastbound Market Street illegal right turns to freeway on-ramp colliding with eastbound bicyclists travelling on bicycle lane

Engineering Changes: Intersection completely redesigned as part of Octavia Boulevard project (opening date September 2005). City took a number of enforcement, signage, and channelizing measures to improve compliance with right-turn restriction on eastbound Market Street. Intersection remains under close SFMTA review.

Collision Trend: Increase in collision totals since 2005, with 2008 having the highest injury total for the intersection as well as having the overall highest total for the city. It is hoped that additional mitigation measures taken in 2009 will reduce collisions.

FIGURE 6
Octavia Boulevard and Market Street, Injury Collisions
(1999-2008)

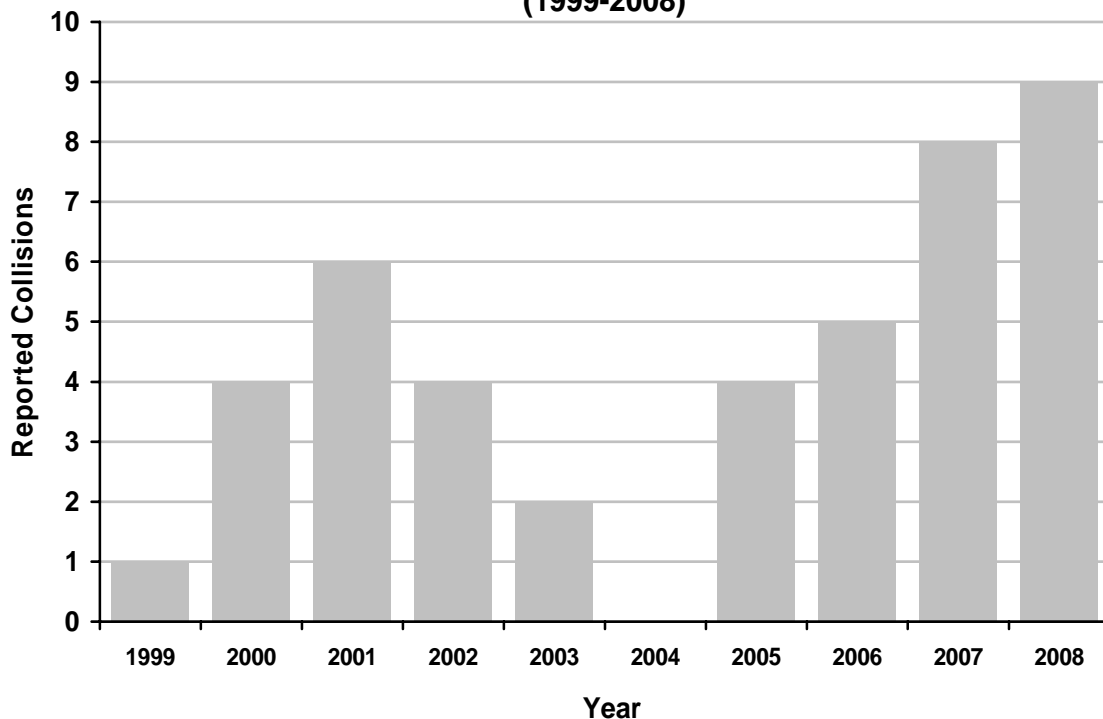


Figure 6: Octavia Boulevard and Market Street, Injury Collisions (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	1	4	6	4	2	0	4	5	8	9

6th Street, Golden Gate Avenue, Market Street and Taylor Street

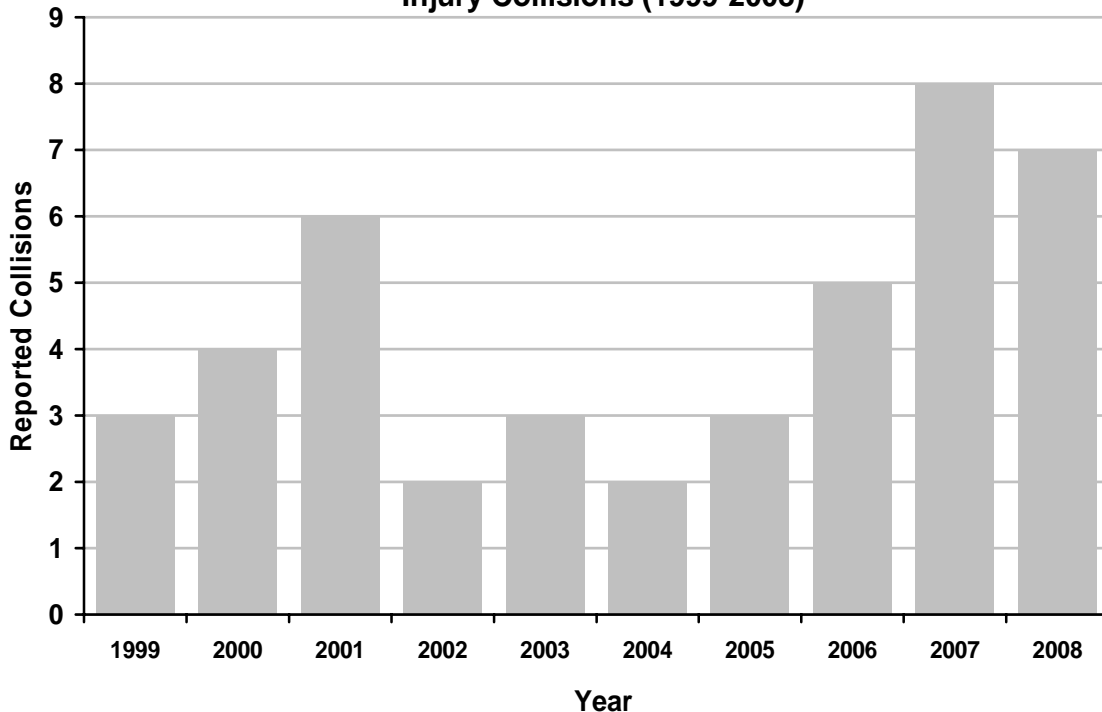
2006-2008 injury collisions: 20

Primary Pattern: Pedestrian collisions

Engineering Changes: Intersection received pedestrian countdown signals in 2003. Crosswalks were repainted in 2009. Pedestrian signals were modified in January of 2009 to make them more visible to pedestrians crossing Market Street. SFMTA installed “No Turn on Red” regulation for all approaches in 2009. A 2009 pilot program that requires eastbound traffic on Market Street to turn right at 8th and 6th streets reduced eastbound volumes at this intersection.

Collision Trend: Increase in collision totals since 2004, with 2007 and 2008 reporting the highest two totals in the past decade. There is no single pattern to the collisions at this location, so establishing effective collision reduction measures has been more difficult.

FIGURE 7
6th, Golden Gate, Taylor and Market,
Injury Collisions (1999-2008)



6th, Golden Gate, Taylor and Market, Injury Collisions (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	3	4	6	2	3	2	3	5	8	7

Bayshore Boulevard and Silver Avenue

2006-2008 injury collisions: 19

Primary Pattern: Northbound Bayshore Boulevard left turn movements

Engineering Changes: Traffic signal was under the jurisdiction of the State (Caltrans) until 2007. Caltrans delegated the intersection to the city for operation and maintenance. SFMTA is now preparing traffic signal design modifications that will include a new left turn green signal arrow for northbound Bayshore Boulevard. These changes are in the design stage, with the construction date not yet determined.

Collision Trend: After recording one of the highest collision totals for 2000 with 13 injury collisions, intersection totals have fallen within the range of six to seven a year. Planned signal upgrade should help address the pattern of left-turn collisions.

FIGURE 8
Bayshore Boulevard and Silver Avenue,
Injury Collisions (1999-2008)

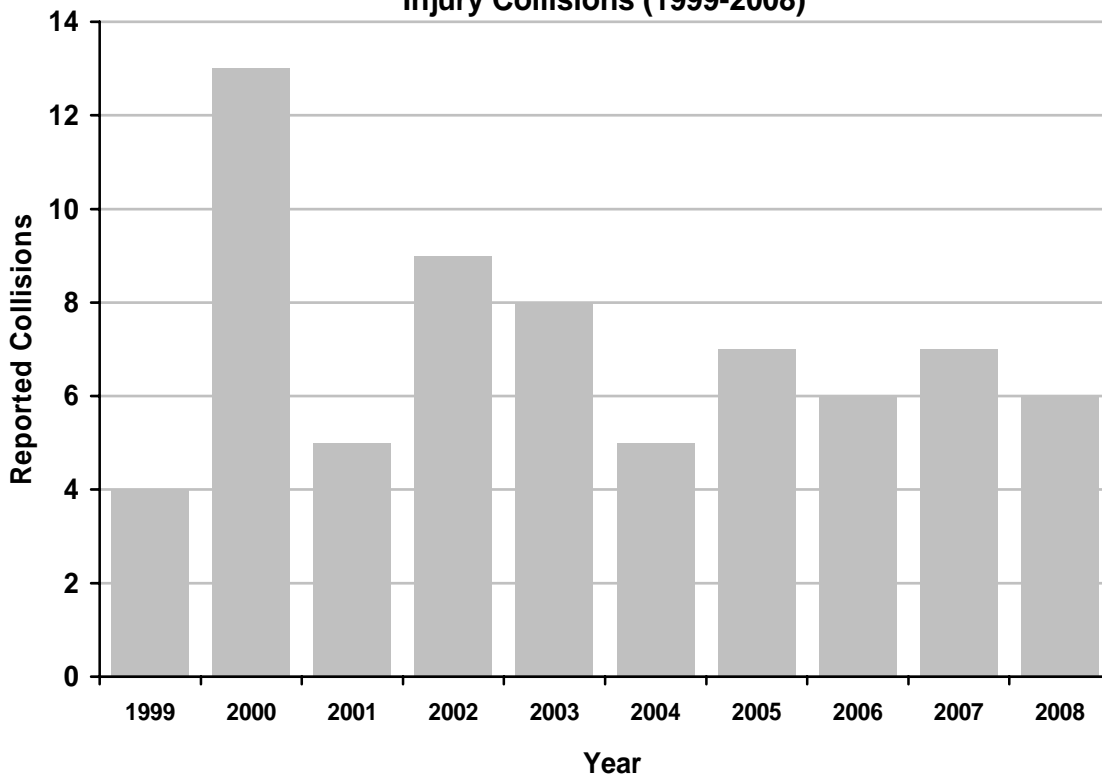


Figure 8: Bayshore Boulevard and Silver Avenue, Injury Collisions (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	4	13	5	9	8	5	7	6	7	6

19th Avenue and Sloat Boulevard

2006-2008 injury collisions: 19

Primary Pattern: Sloat Boulevard eastbound left-turn collisions with Sloat Boulevard westbound through vehicles.

Engineering Changes: In the past 10 years the location has been fully upgraded, including addition of mast arm signals, pedestrian signals, red light cameras, and other related improvements. More recently SFMTA obtained Caltrans approval (both Sloat Boulevard and 19th Avenue are State highways) to install a left turn signal green arrow phase for eastbound Sloat Boulevard. These changes were installed by the SFMTA in November of 2007.

Collision Trend: Total injury collisions reported for the intersection dropped by half in 2008 compared to 2007. This total is the lowest in the past 10 years.

FIGURE 9
19th Avenue and Sloat Boulevard, Injury Collisions (1999-2008)

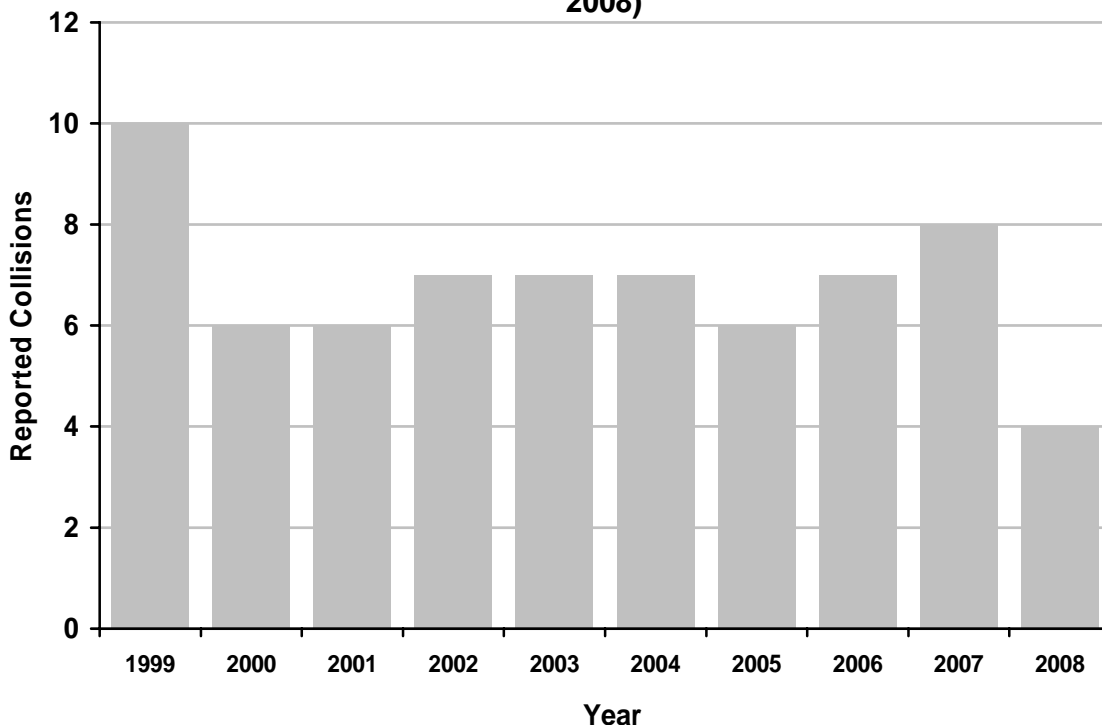


Figure 9: 19th Avenue and Sloat Boulevard, Injury Collisions (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	10	6	6	7	7	7	6	7	8	4

13th Street and South Van Ness Avenue

2006-2008 injury collisions: 19

Primary Pattern: Southbound South Van Ness Avenue broadsides, left turns, and rear end collisions.

Engineering Changes: Since the closure of the Central Freeway in 1996 various traffic changes have been made here including revised traffic lanes, new left turn and right turn signalization for 13th Street, and longer yellow and all-red clearance phases. SFMTA modified the signal timing in December of 2007 to reduce cycle length after the opening of Octavia Boulevard. In 2008 SFMTA installed pedestrian countdown signals crossing 13th Street.

Collision Trend: Collision total dropped in 2008 relative to 2007, falling back to recent annual average collision totals.

FIGURE 10
13th Street and South Van Ness Avenue,
Injury Collisions (1999-2008)

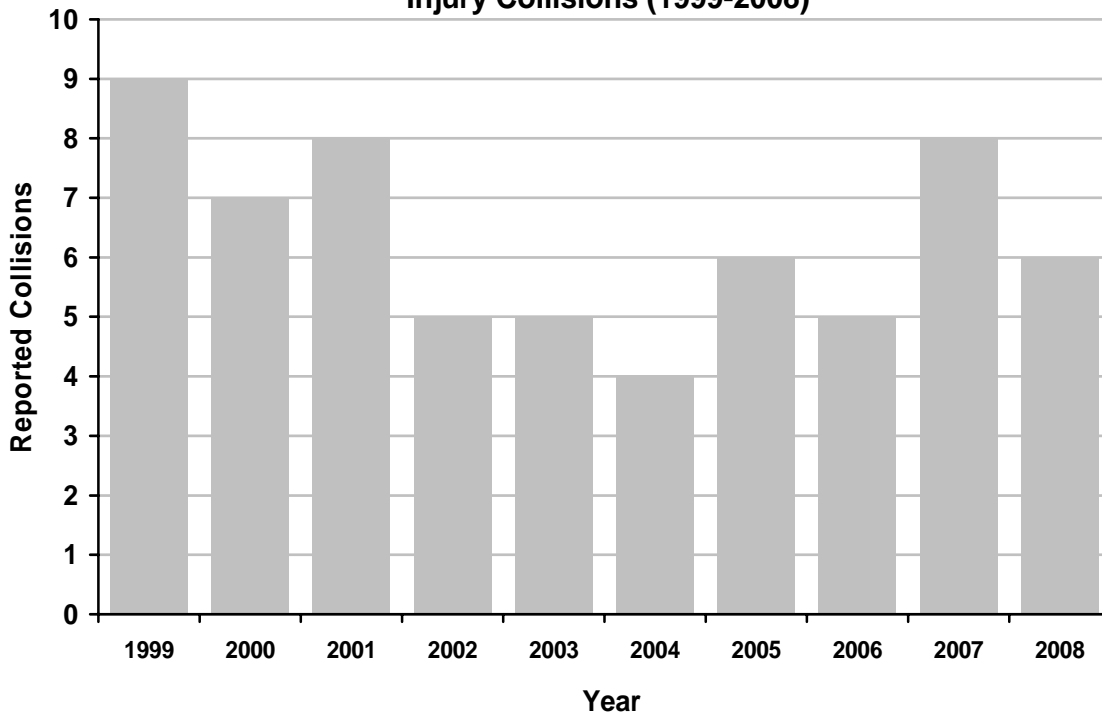


Figure 10: 13th Street and South Van Ness Avenue, Injury Collisions (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	9	7	8	5	5	4	6	5	8	6

6th Street and Howard Street

2006-2008 injury collisions: 18

Primary Pattern: Turning vehicles and pedestrians.

Engineering Changes: New curb ramps and northeast corner sidewalk extension were completed as part of the City’s 6th Street repaving project. SFMTA modified the signal timing in 2004 to add all-red signal clearance phases and in 2007 to add a pedestrian leading interval. Dual left-turn lane from westbound Howard to 6th Street was removed.

Collision Trend: Despite drops in 2005 and 2006, injury collision totals were above six collisions in both 2007 and 2008. SFMTA will pursue adding a red zone on the southeast corner of intersection to increase visibility of pedestrians to turning traffic.

FIGURE 11
6th Street and Howard Street, Injury Collisions (1999-2008)

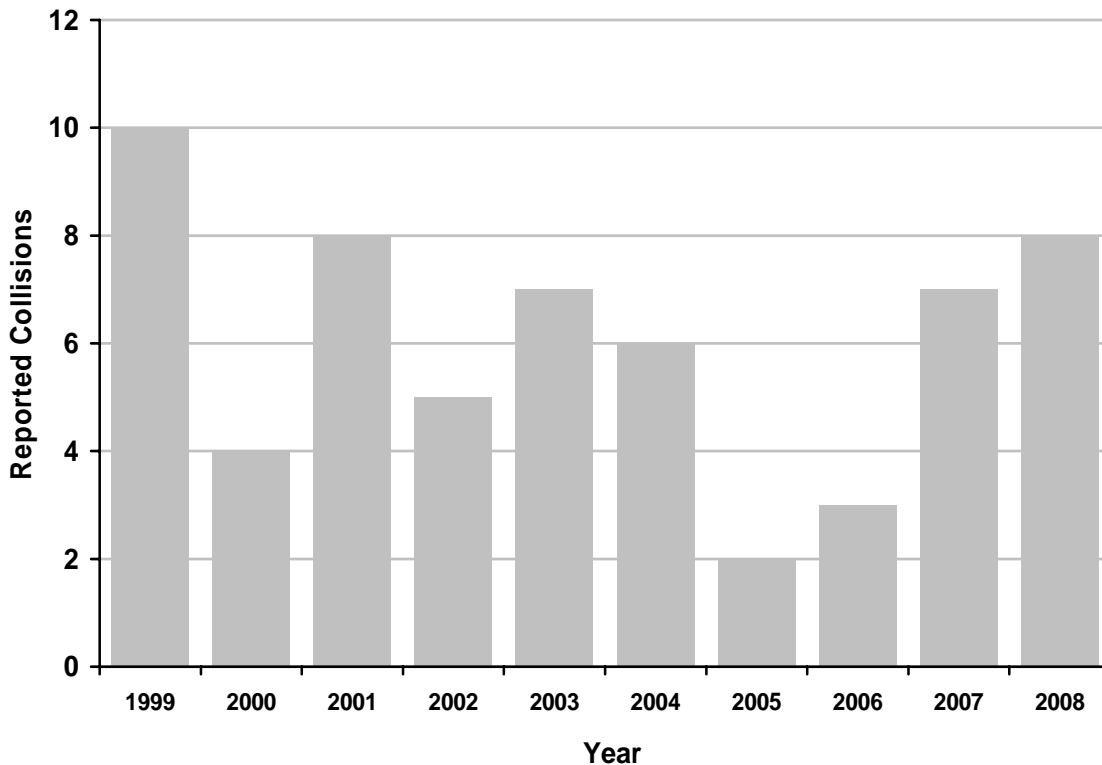


Figure 11: 6th Street and Howard Street, Injury Collisions (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	10	4	8	5	7	6	2	3	7	8

19th Avenue and Junipero Serra Boulevard

2006-2008 injury collisions: 18

Primary Pattern: Rear-end collisions for both Highway 1 approaches.

Engineering Changes: Traffic signal timing has been adjusted in the past to lengthen yellow phase and add all-red clearance phases. Intersection was upgraded as part of Phase 1 of the joint State-City Highway 1 signal project. The project activated new overhead mast arm signals and signal timing plan in April of 2009.

Collision Trend: Collision total dropped in 2008 relative to the 2005-2007 reported totals. Collision totals may improve after the completion of the major signal upgrade.

FIGURE 12
19th Avenue and Junipero Serra Boulevard,
Injury Collisions (1999-2008)

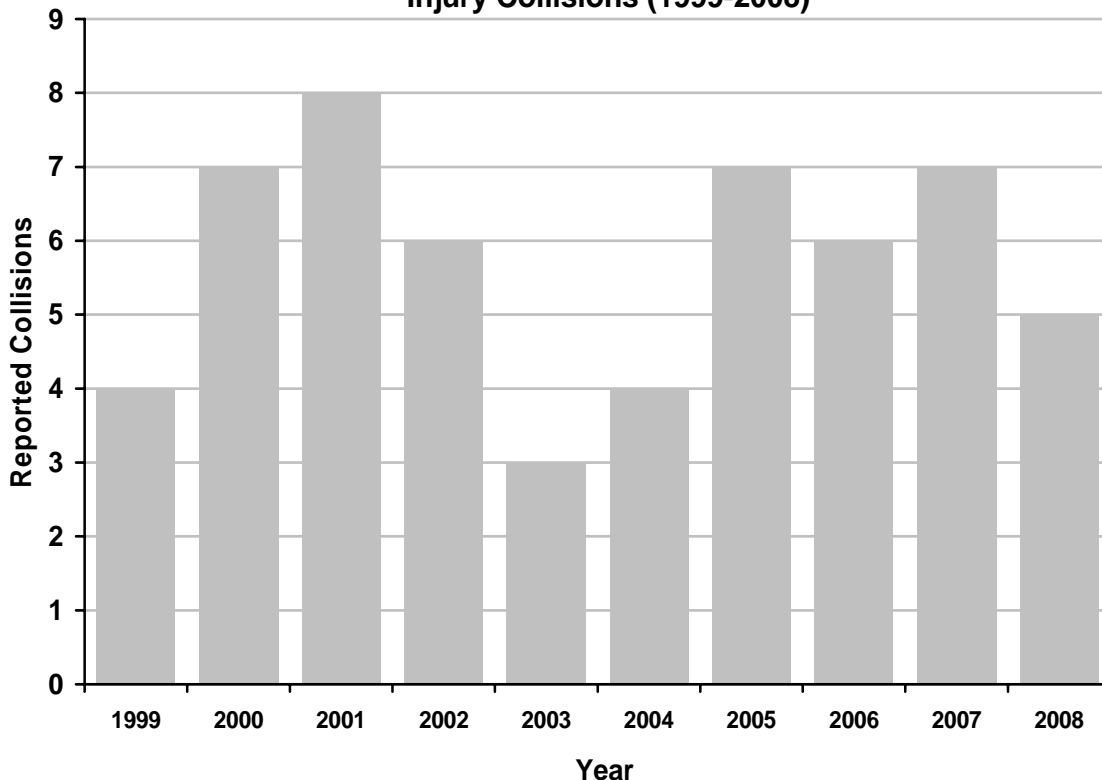


Figure 12: 19th Avenue and Junipero Serra Boulevard, Injury Collisions (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	4	7	8	6	3	4	7	6	7	5

**Photo 4: 19th Avenue and Junipero Serra Boulevard
Joint City-State traffic signal upgrade (2008-2009)**



Gough and Market Streets

2006-2008 injury collisions: 18

Primary Pattern: Eastbound and southbound broadsides.

Engineering Changes: SFMTA added larger overhead signal heads facing eastbound Market Street at Gough Street in October of 2007. A median mounted signal was added in July of 2009 as part of a citywide signal upgrade project. Signal already has a staggered yellow light and all-red phase for southbound Gough Street.

Collision Trend: A sharp drop in collisions for 2008 appears an anomaly but could indicate that signal hardware changes in 2007 may have been effective. Further signal changes completed in 2009 may help ensure continued improvement.

FIGURE 13
Gough and Market Streets, Injury Collisions (1999-2008)

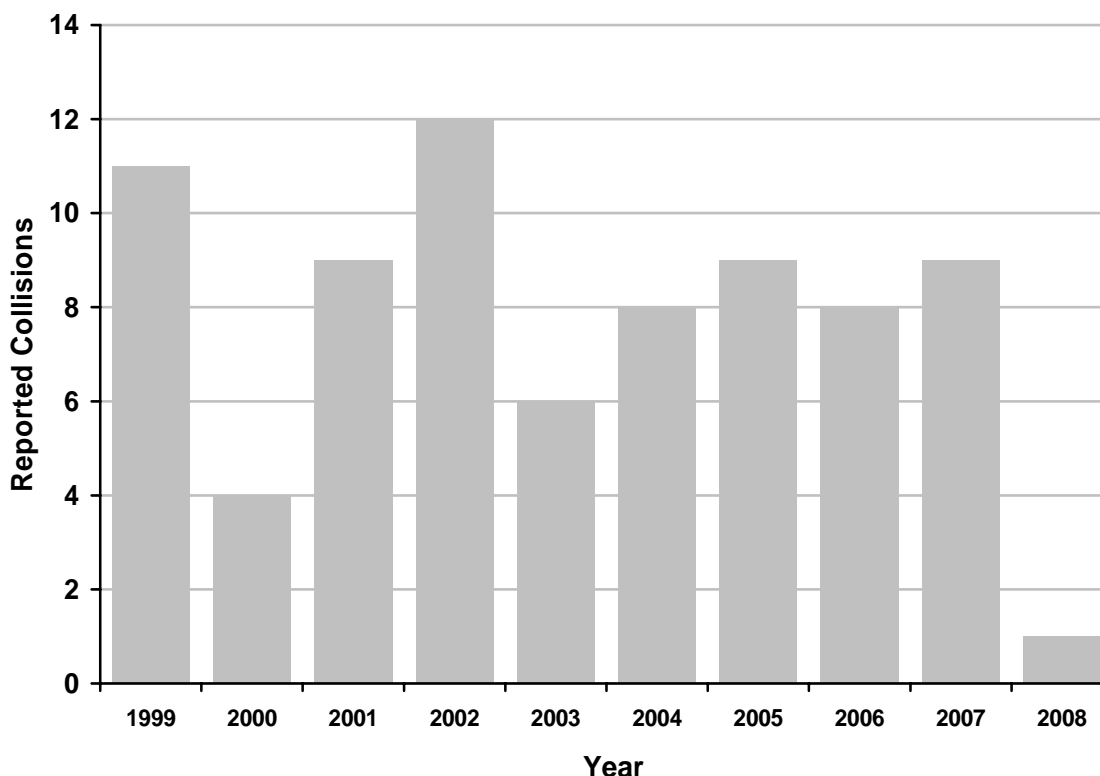


Figure 13: Gough Street and Market Street, Injury Collisions (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	11	4	9	12	6	8	9	8	9	1

Park Presidio Boulevard and Lake Street

2006-2008 injury collisions: 16

Primary Pattern: Rear-end collisions for both Highway 1 approaches.

Engineering Changes: Pedestrian signals were added to the location in 2002. Signal timing was further modified in 2003, including new yellow and all-red phase durations. Red light camera was added in 2004. Intersection is now candidate for signal upgrade as part of phase three of the joint State-City Highway 1 upgrade project.

Collision Trend: It is not evident at this time why collision totals increased to eight injury collisions in 2008 from 3 in 2007. SFMTA will install larger, 12-inch yellow and green signal head indications facing Park Presidio Boulevard in first half of 2010.

FIGURE 14
Park Presidio Boulevard and Lake Street,
Injury Collisions (1999-2008)

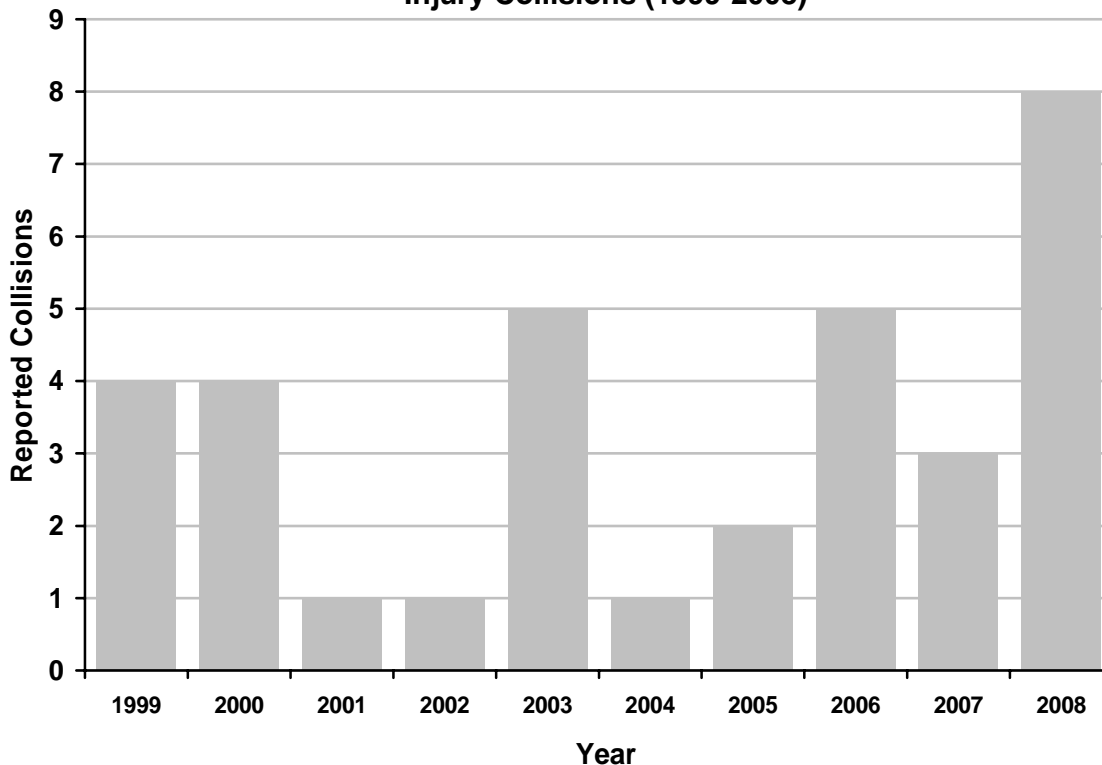


Figure 14: Park Presidio Boulevard and Lake Street, Injury Collisions (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	4	4	1	1	5	1	2	5	3	8

Essex Street and Harrison Street

2006-2008 injury collisions: 16

Primary Pattern: Westbound Harrison broadsides with southbound Essex Street.

Engineering Changes: Intersection was taken over from Caltrans by the City in 1998. Pedestrian countdown signals and longer yellow phases were added in 2003 and 1.5 second all red phases added in 2007. During the past five years the intersection has been impacted by construction changes related to Caltrans' Bay Bridge retrofit project.

Collision Trend: This location shows a clear upward collision pattern after 2004. SFMTA will investigate how construction changes could have affected the intersection and work with the State on whether further changes are recommended once construction is completed.

FIGURE 15
Essex Street and Harrison Street, Injury Collisions (1999-2008)

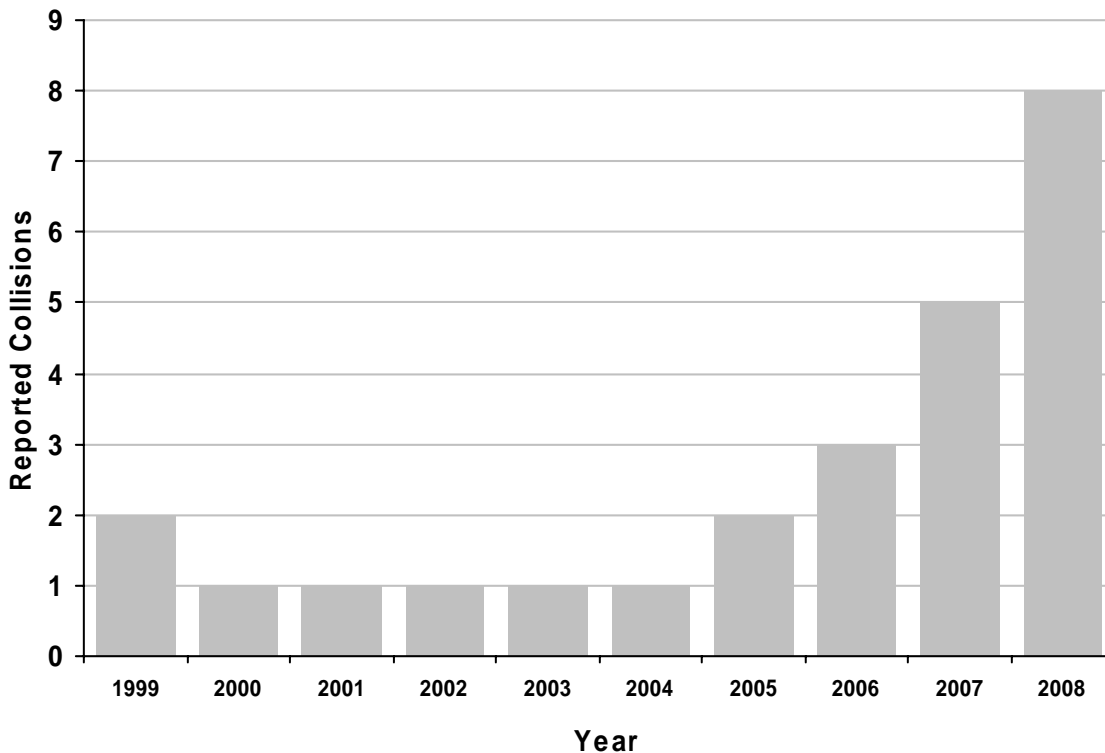


Figure 15: Essex Street and Harrison Street, Injury Collisions (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	2	1	1	1	1	1	2	3	5	8

PART 4: PEDESTRIAN AND BICYCLE COLLISIONS

About a fourth of San Francisco’s 3,010 injury collisions and half of the 27 fatal collisions involve pedestrians (Table 6). Last year bicycles were involved in 16 percent of injury collisions and 11 percent of citywide fatal collisions.

**TABLE 6
2008 Non-Fatal Injury and Fatal Collisions by Parties Involved**

Party	Total Injury Collisions	Percent of Injury Collisions	Total Fatal Collisions	Percent of Fatal Collisions
Pedestrian	799	27%	13	48%
Bicyclist	468	16%	3	11%

Table 7 shows collision totals using the SWITRS field “Motor Vehicle Involved With.” Over half of fatal collisions in 2008 involved a motor vehicle involved with a pedestrian or bicycle. There were 21 bicycle-pedestrian injury collisions reported in 2008. (Different collision totals between Tables 2, 6 and 7 are due to the various ways collisions can occur and be classified by the SFPD using the State collision form.)

**TABLE 7
2008 Non-Fatal Injury and Fatal “Motor Vehicle Involved With” Collisions**

Motor Vehicle Involved With	Total Injury Collisions	Percent of Injury Collisions	Total Fatal Collisions	Percent of Fatal Collisions
Other Motor Vehicle	1,449	48%	4	15%
Pedestrian	755	25%	12	44%
Bicyclist	390	13%	3	11%
Fixed Object	132	5%	6	22%
Others	284	9%	2	7%

Bicycle Collision Totals

There were 468 injury collisions in 2008 involving bicyclists as a party, up slightly from the 451 total recorded in 2007. The 2008 injury collision total is the highest in the past ten years. Bicycle-involved collisions have not declined recently like other collision types, instead going up every year since 2002 (Figure 16). SFMTA Bicycle Program staff has looked at these collision trends in more detail but no immediate cause or factor has been indentified. This increase in collisions has coincided with a statistically significant increase in the number of bicyclists riding on various city streets as measured by annual counts taken by the SFMTA (Table 8).

Until 2009 the City was under an injunction preventing any bicycle-related infrastructure changes from taking place prior to the completion of extensive environmental analysis. The SFMTA will make safety upgrades along many important bicycle routes as the injunction is lifted for specific projects.

FIGURE 16
San Francisco Injury Collisions Involving Party Type Bicyclist
(1999-2008)

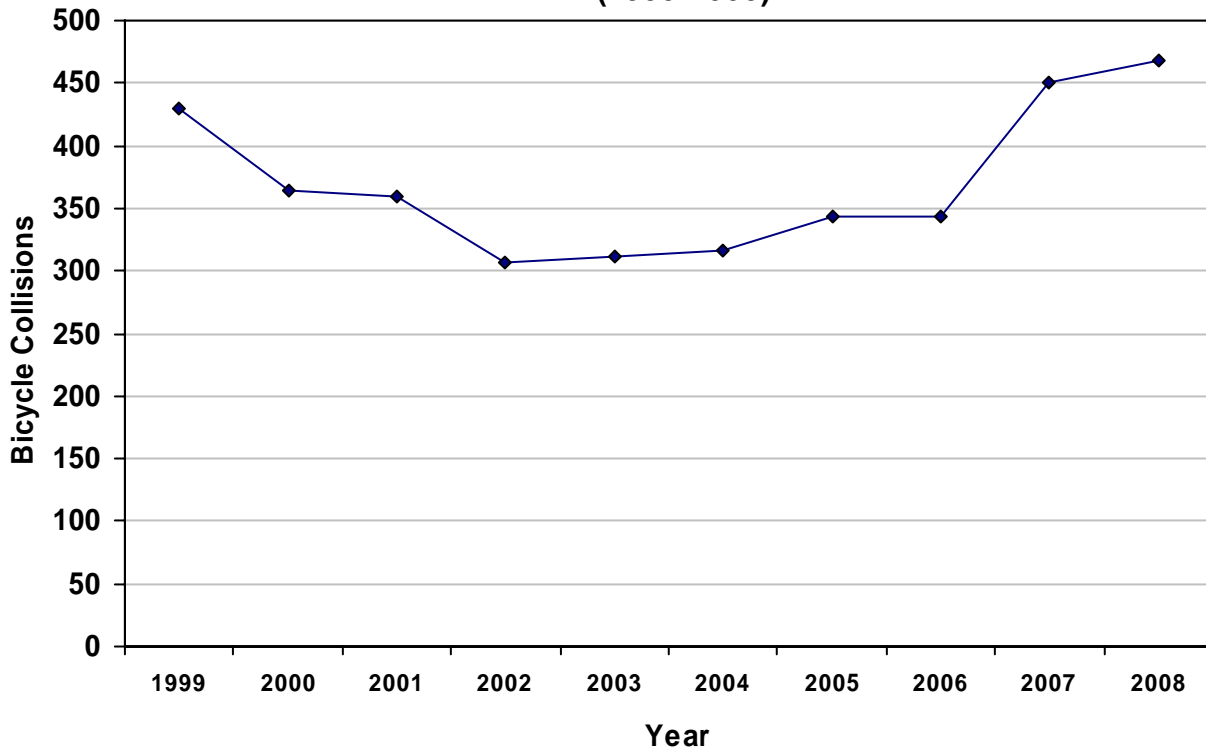


Figure 16: San Francisco Injury Collisions Involving Party Type Bicyclist (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	429	364	360	307	311	316	343	343	451	468

TABLE 8
Locations with Statistically Significant Changes
In Bicycle Volumes during the Evening Commute (2006 to 2008)

Location	2006 Bicycle Counts	2008 Bicycle Counts	Percentage Change
Market Street and 11 th Street	390	522	34%
11th Street and Howard Street	156	232	49%
8th Street and Townsend Street	123	191	55%
Sutter Street and Stockton Street	32	69	116%
Polk Street and McAllister Street	169	214	27%
Market Street and 5 th Street	314	443	41%
Illinois Street and Mariposa Street	26	43	65%
17th Street and Valencia Street	325	485	49%
23rd Street and Potrero Street	24	50	108%
Scott Street and Fell Street	147	222	51%
Scott Street and Page Street	292	418	43%
Marina Avenue at Cervantes Boulevard	183	352	92%
The Embarcadero and Townsend Street	131	240	83%
The Embarcadero and Broadway	236	458	94%
7th Street and 16 th Street	59	105	78%
Randall Street and San Jose Avenue	24	76	217%
Geneva Avenue and Alemany Boulevard	8	22	175%

Table 8 Source: "2008 San Francisco State of Cycling Report," San Francisco Municipal Transportation Agency, Table 1, Page 5.

Table 9 summarizes fatal bicycle collision totals for 2002-2008. These had remained in the range of one to two a year until three fatal crashes were reported in 2008.

TABLE 9 - Fatal Collisions Involving Bicycles, 2002-2008

2002	2003	2004	2005	2006	2007	2008
1	1	1	2	2	1	3

Tables 10 and 11 break down primary collision types and causes for collisions in which a motor vehicle and a bicycle were involved, regardless of which party was at fault.

**TABLE 10
2008 Non-Fatal Injury Bicycle Collisions by Primary Collision Types**

Type	Collisions	Percent
Broadside (Right-Angle)	172	44%
Sideswipe	95	24%
Not Stated	21	5%
Other	102	26%

**TABLE 11
2008 Non-Fatal Injury Bicycle Collisions by Primary Collision Causes**

Cause	Collisions	Percent
Improper Turning	80	21%
Other Hazardous Movement	64	16%
Vehicle Right-of-Way Violations	61	16%
Traffic Signals and Signs	56	14%
Other	129	33%

Table 12 is a list of the highest bicycle injury collision areas. It includes all collisions between a motor vehicle and a bicycle reported within 100 feet of the listed intersections.

TABLE 12
Highest “Motor Vehicle Involved with Bicycle” Injury Collision Intersections
Injury collisions within a radius of 100 feet, 2006-2008

Street A	Street B	2006-2008 Injury Collisions	2003-2005 Injury Collisions	Three- year change
Fell Street	Masonic Avenue	17	4	+13
Market Street	Octavia Boulevard	17	3	+14
Market Street	Valencia Street	9	4	+5
Duboce Avenue	Valencia Street	8	4	+4

In 2008 SFMTA was able to obtain a relief from the injunction against doing bicycle projects to install a signal treatment that separated Fell Street left-turning motor vehicles from bicycles and pedestrians crossing Masonic Avenue on the south side at Fell Street (pictured). This Panhandle path crosswalk had above average number of bicycle collisions. These changes were completed and refined in the fourth quarter of 2008. Observations and feedback the SFMTA has received indicate that the operation of this intersection has improved.

The rise in bicycle-related collisions on Market Street at Octavia Boulevard and Valencia Street has been mentioned in a previous section of this report. SFMTA Bicycle Program staff will review patterns for Duboce Avenue and Valencia Street, where traffic signals were recently upgraded to improve overall safety.



Photo 5: Masonic Avenue and Fell Street

Pedestrian Collisions

The 2008 total of 799 injury collisions involving a pedestrian as a party is almost the same as the figure of 796 injury collisions reported in 2007 (Figure 17). In the first half of the decade pedestrian collisions steadily came down from the over 1,000 incidents recorded annually in the 1990's. Further declines have unfortunately not been reported in 2007 or 2008.

FIGURE 17
San Francisco Injury Collisions Involving Pedestrians
(1999-2008)

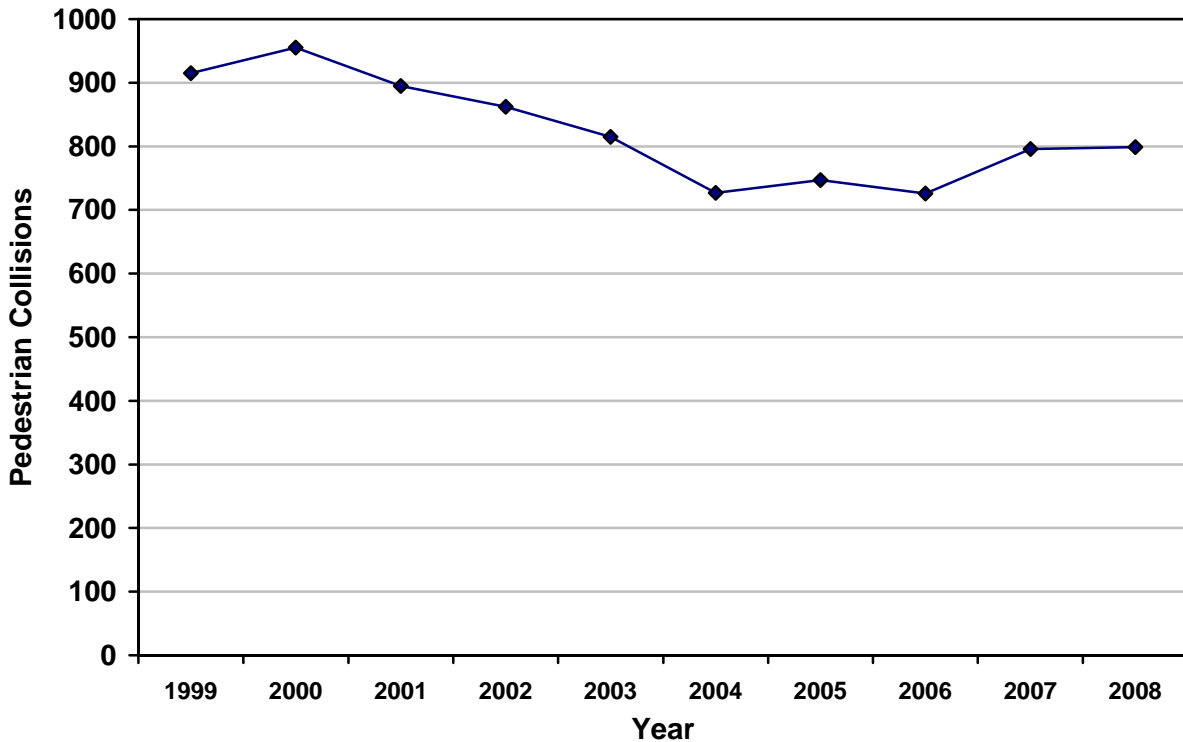


Figure 17: San Francisco Injury Collisions Involving Pedestrians (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	915	955	895	862	815	727	747	726	796	799

The number of fatal collisions involving a pedestrian decreased to 13 in 2008, the lowest total of the decade (Figure 18). This constitutes a reversal from the rise noted in 2007. The recent trend among pedestrian fatal collisions appears to be down, with the three lowest totals reported in 2005, 2006 and 2008.

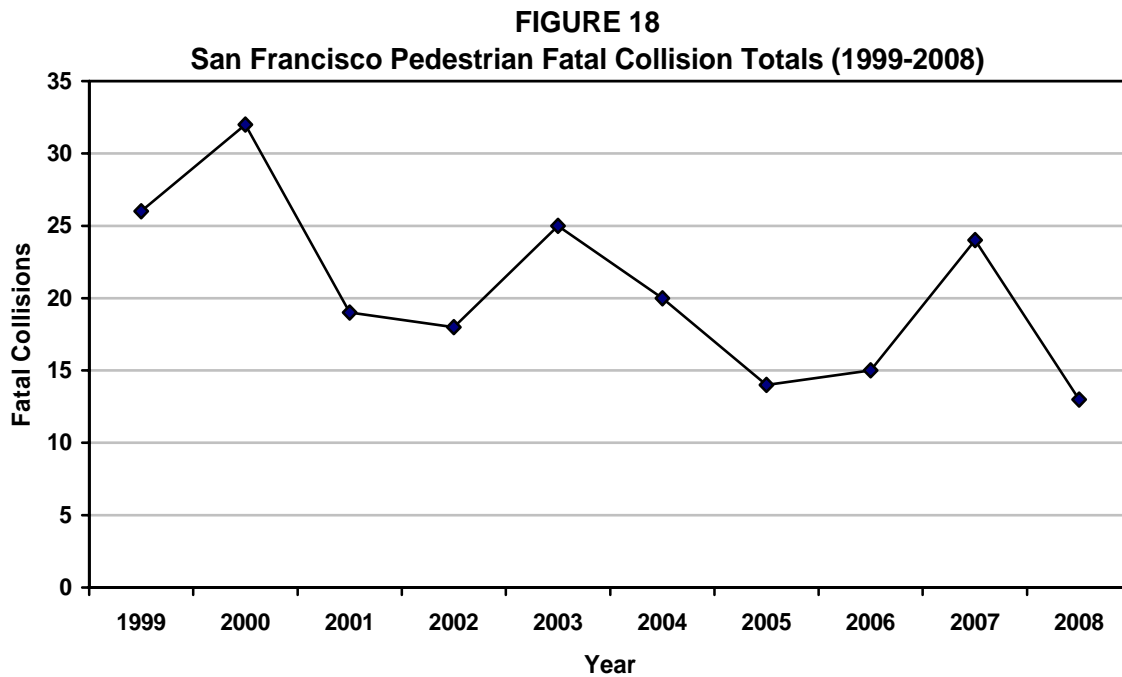


Figure 18: San Francisco Fatal Collision Totals (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	26	32	19	18	25	20	14	15	24	13

Table 13 notes the collision causes per the SFPD officer at the scene for collisions in which a motorist hit a pedestrian. The plurality of collisions (41 percent) was caused by a violation of the pedestrian right-of-way on the part of the motorist. This most frequently happens when a motorist does not yield to a pedestrian at a crosswalk or when a motorist makes a turn at a signalized intersection without yielding first.

TABLE 13
2008 Non-Fatal Pedestrian Bicycle Collisions by Primary Collision Cause

Cause	Collisions	Percent
Motorist Violation of Pedestrian Right-of-Way	310	41%
Pedestrian Violation	237	31%
Violation of Traffic Signals and Signs	39	5%
Other	169	22%

Table 14 has the four highest injury vehicle-pedestrian collision locations for the three-year period 2006-2008. All four intersections are located in a four block stretch along the 6th Street and Golden Gate Avenue corridors. The top two intersections were discussed in more detail in the section on highest collision intersections. Despite having made various engineering changes to these four intersections, including signal and traffic control upgrades, they had higher pedestrian collision totals in the past three years compared to the previous three-year period 2003-2005.

TABLE 14
Three Year Highest Injury Vehicle-Pedestrian Collision Intersections
Intersections with 7 or more collisions resulting in injury, 2006-2008

Street A	Street B	2006-2008 Injury Collisions	2003-2005 Injury Collisions	Three-year change
6 th Street/Market	Golden Gate/Taylor	11	4	+7
6 th Street	Howard Street	9	3	+6
Jones Street	Golden Gate Avenue	7	4	+3
6 th Street	Mission Street	7	6	+1

At the citywide level, SFMTA has implemented a variety of measures to improve pedestrian safety, including installing new pedestrian signs, pavement markings, signal timing settings, countdown pedestrian signals, audible signals, traffic regulations, and traffic calming measures. General signal upgrades also benefit pedestrians by installing pedestrian signals at intersections where these devices are not present and by improving the visibility of signal indications to motorists. SFMTA has also worked with the San Francisco Police Department and the Department of Public Health on coordinated pedestrian enforcement and educational campaigns.



Photo 6: Pedestrian Safety Campaign Billboard

PART 5: INJURY COLLISIONS AND VULNERABLE AGE GROUPS

This section looks at collisions and age, with special emphasis on school-age children and seniors. Figure 19 shows the overall trend of injury collisions reported for ages 5 to 17, broken down by whether the party was a driver, pedestrian or bicyclist. Overall recent trends are positive. Since 1999 injury collisions involving drivers younger than 18 years old have dropped by more than 50 percent, pedestrian collisions have dropped by 36 percent, and bicycle collisions have declined by 68 percent.

FIGURE 19
San Francisco Injury Collisions Involving Parties Ages 5 to 17
(1999-2008)

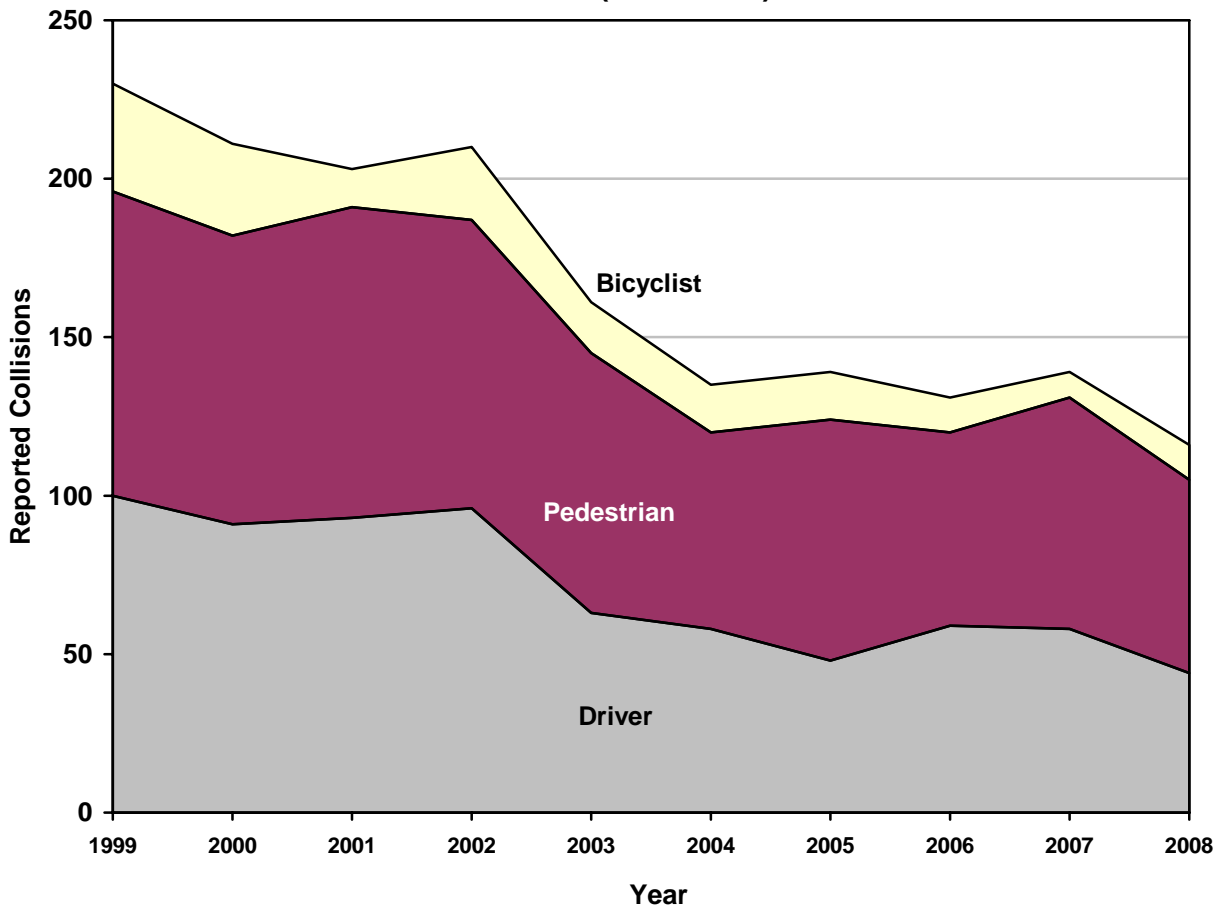


Figure 19: San Francisco Injury Collisions Involving Parties Ages 5 to 17 (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Driver	100	91	93	96	63	58	48	59	58	44
Pedestrian	96	91	98	91	82	62	76	61	73	61
Bicyclist	34	29	12	23	16	15	15	11	8	11

Figure 20 shows the same injury information for parties ages 65 and older. Trends were positive until 2006, after which there was an increase in collisions involving senior drivers and pedestrians. During this period individuals 65 and older were generally three times as likely to be involved in a collision as a driver than as a pedestrian.

Figure 20
San Francisco Injury Collisions, Parties Ages 65 and Older
(1999-2008)

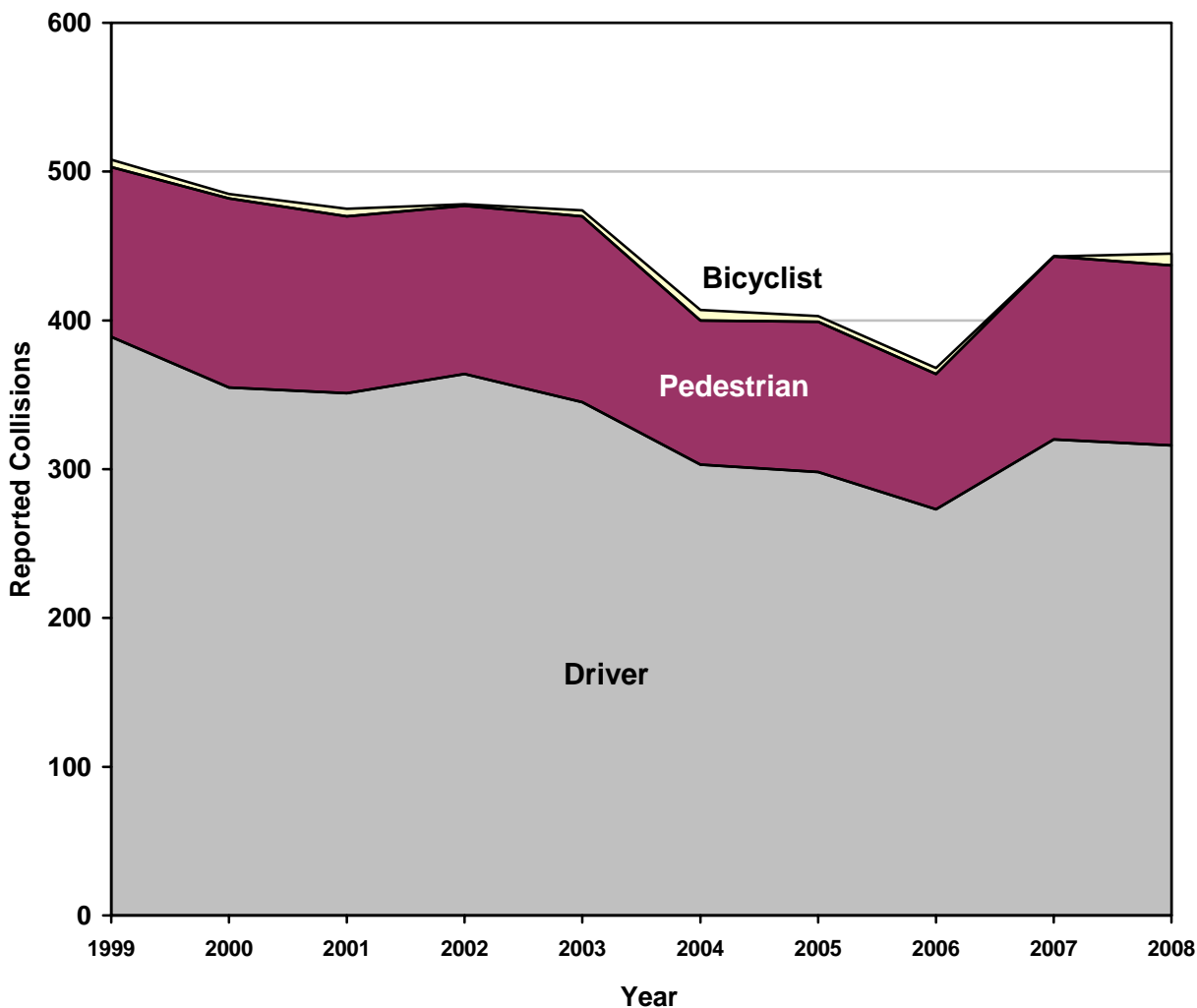


Figure 20: San Francisco Injury Collisions, Parties Ages 65 and Older (1999-2008)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Driver	389	355	351	364	345	303	298	273	320	316
Pedestrian	114	127	119	113	125	97	101	91	123	121
Bicyclist	5	3	5	1	4	7	4	4	0	8

Tables 15 and 16 describe three-year injury totals by age of pedestrian or bicyclist involved in the collision. Census data provided in Table 15 does not necessarily reflect the demographic characteristics of pedestrians or bicyclists on San Francisco’s streets. Pedestrian collisions do nevertheless somewhat follow the age distribution of the city as a whole. Bicycle collisions tend to be more frequent among young adults, however, with 70 percent of collisions involving parties between the ages of 20 to 39 years old.

**TABLE 15
Pedestrian and Bicycle Injury Collisions by Party Age (2006-2008)**

Pedestrian or Bicyclist Age	Pedestrian Injury Collisions	Percent of Pedestrian Collisions	Bicycle Injury Collisions	Percent of Bicycle Collisions
0 to 9 years old	59	3%	11	1%
10 to 19 years old	225	10%	61	5%
20 to 29 years old	415	18%	538	43%
30 to 39 years old	357	15%	330	26%
40 to 49 years old	387	17%	179	14
50 to 59 years old	418	18%	90	7%
60 to 69 years old	200	9%	31	2%
70 to 79 years old	152	7%	5	0%
80 to 89 years old	83	4%	1	0%
Over 90 years old	14	1%	0	0%
Total	2310		1246	

**TABLE 16
Pedestrian and Bicycle Collisions by Major Age Groupings (2006-2008)**

Pedestrian or Bicyclist Age	Percent of Pedestrian Collisions	Percent of Bicycle Collisions	Population % San Francisco 2000 Census
0 to 19 years old	12%	6%	16%
20 to 59 years old	68%	91%	66%
Over 60 years old	19%	3%	18%

PART 6: MUNICIPAL RAILWAY COLLISIONS

The source of the collision data for this section is the SFMTA’s TransitSafe database. San Francisco’s TransitSafe data includes all SFMTA reported safety incidents involving Muni vehicles regardless of whether an SFPD collision report was filed.

Table 17 provides a summary of the collision totals from 2006 to 2008 by degree of severity, including a larger percentage of collisions that did not result in personal injury (property damage only). Reported non-injury collisions involving Muni vehicles totaled 1,566 and non-fatal injury collisions totaled 179 in 2008. Compared to 2007, non-injury property damage only collisions increased 11 percent but non-fatal injury collisions decreased nine percent. The number of collisions resulting in fatalities in 2008, five, was a drop of three collisions from the 2007 total.

**TABLE 17
2006-2008 Muni Collisions by Severity**

	2006	2007	2008
Fatal	4	8	5
Non-Fatal Injury	191	197	179
Non-Injury	1,486	1,417	1,566

For the summary of highest collision frequency locations for 2008, a collision’s location was coded to the closest intersecting cross street. Table 18 thus is not a list of intersection collisions but rather areas of highest concentration, including possible mid-block collisions. The highest two injury collision locations in 2008 were 7th and Market streets and the multiple leg intersection of 14th, Church and Market streets. SFMTA will continue to review these and other locations for possible safety improvements.

**TABLE 18
Highest Muni Injury Collision Areas in 2008
Vicinity of Intersections with 3 or more injury collisions**

Main Street	Cross Street	Injury Collisions
7th Street	Market Street	4
14 th Street	Church Street and Market Street	3

PART 7: COLLISIONS AT UNSIGNALIZED INTERSECTIONS

Table 19 includes the highest injury collision intersections that did not have a traffic signal during the three-year period 2006 through 2008. Mitigation measures for lower volume unsignalized intersections can be different than those for signalized intersections, such as additional STOP signs, parking prohibitions, turn prohibitions, or signalization. Most locations in Table 18 reported lower injury collision totals in 2008 (zero to one collision), suggesting a possible improvement in their annual trends.

**TABLE 19
Injury Collisions at Unsignalized Intersections
Intersections with 6 or more collisions resulting in injury (2006-2008)**

Main Street	Cross Street	2006-2008 Injury Collisions	2008 Injury Collisions
Sunset Boulevard	Ulloa Street	9	0
6 th Street	Jessie Street	9	1
16 th Street	Capp Street	7	1
Kezar Drive	Lincoln Way	7	1
Goethe Street	San Jose Avenue	6	1
Capitol Avenue	Ocean Avenue	6	3
Cole Street	Haight Street	6	2
16 th Street	Florida Street	6	1
Alemaný Boulevard	San Juan Avenue	6	1

SFMTA has already applied for a State safety grant for top location Sunset Boulevard and Ulloa Street. Visibility red zones were painted at 6th and Jessie Streets. Traffic signals will be installed at Capitol and Ocean avenues as well as Alemany Boulevard and San Juan Avenue, both funded through the Proposition K transportation sales tax administered by the San Francisco County Transportation Authority. Remaining intersections in Table 16 have already been or will be reviewed by SFMTA.

**Photo 7: Geary Boulevard and Spruce Street
New traffic signal (January 2009)**



PART 8: IS SAN FRANCISCO AN UNSAFE CITY FOR PEDESTRIANS?

It is natural to want to compare safety statistics across cities in an effort to put collision numbers in a broader perspective. When such comparisons have been attempted, the headlines have usually been that San Francisco is one of “the least safe” or “most dangerous” cities for pedestrians in the country. These types of assessments are usually based on per capita rates that simply divide the annual number of pedestrian fatalities by a city’s population total. For example, in 2003 the National Highway Traffic Safety Administration (NHTSA) released a ranking in which San Francisco had the fourth highest per capita pedestrian fatality rate in the United States, ahead of Phoenix, Arizona but worse than Dallas, Texas.² In 2007 San Francisco had the highest pedestrian injury collision per capita rate among the largest cities in California (Figure 21). However, there are significant problems with comparing collision totals using per capita rates. Even after population size is accounted for, cities can have vastly different vehicular miles traveled, daytime populations, transportation networks, built densities, and walking rates. The Metropolitan Transportation Commission, when looking at similar per capita rates for the Bay Area, recognized that “San Franciscans likely make more trips by walking than residents of other, less dense cities, which may account for the higher number of pedestrian fatalities and injuries in San Francisco County.”³

To address these methodological issues, researchers from the Surface Transportation Policy Partnership (STPP) in the 1990’s developed the Pedestrian Danger Index (PDI). The PDI computes the rate of pedestrian deaths relative to the amount of walking work trips according to the Census. This measure of actual walking activity, imperfect as it is acknowledged to be, results in a more balanced comparison among urban areas. In a 2009 follow up report by STPP and Transportation for America, 39 other metro areas in the U.S. had a higher pedestrian fatal collision rate than the San Francisco-Oakland-Fremont metro area.⁴ Using a similar approach but focusing on all pedestrian injury collisions, SFMTA staff prepared Figure 22 for the thirteen largest cities in California. Figures 21 and 22 show how simply adding walk trips to work results in a different perspective about the relationship between collision and population totals.

Comparisons such as these are not meant to minimize the importance of lowering the high number of pedestrian collisions in San Francisco and continuing to improve conditions for walking. Rather, an understanding of pedestrian statistics can serve to ease public fears that could discourage walking. Although further improvements are needed, walking in San Francisco today is a healthy, sustainable, and safe form of transportation.

² “NHTSA Releases Major Research Report On Crashes Involving Pedestrians in U.S.,” NHTSA Press Release, Tuesday, April 22, 2003.

³ “Overview: Pedestrian Collisions,” Metropolitan Transportation Commission, from www.mtc.ca.gov.

⁴ “Dangerous by Design,” page 19, Transportation for America, 2009.

FIGURE 21
2007 Pedestrian Injury Collisions Per Capita
California Cities with more than 250,000 Population

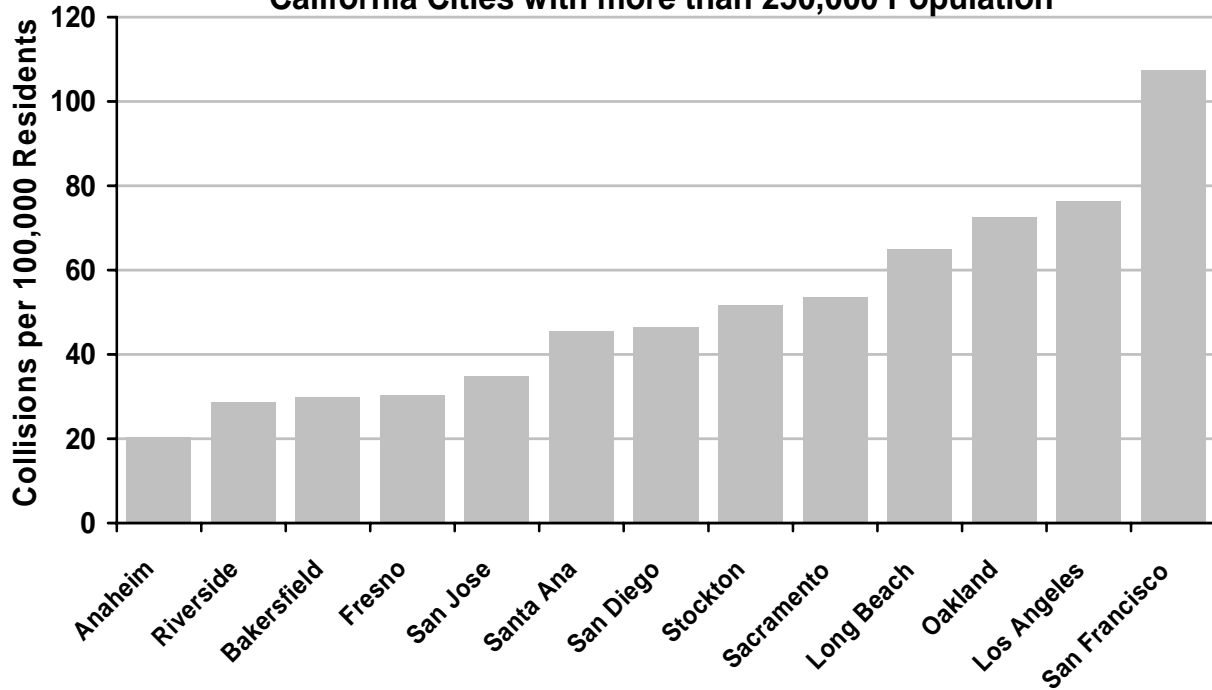


Figure 21: 2007 Pedestrian Injury Collisions Per Capita
California Cities with more than 250,000 Population

City	2007 Population	2007 Pedestrian Injury Collisions	Pedestrian Injury Collisions per 100,000 residents
Anaheim	342,856	70	20
Riverside	316,154	90	28
Bakersfield	324,540	97	30
Fresno	476,460	144	30
San Jose	922,389	320	35
Santa Ana	327,780	149	45
San Diego	1,276,740	592	46
Stockton	295,070	152	52
Sacramento	451,404	242	54
Long Beach	458,302	297	65
Oakland	358,829	260	72
Los Angeles	3,806,003	2,906	76
San Francisco	764,976	822	107

Sources: U.S. Census Bureau, 2007 American Community Survey; California Office of Traffic Safety, 2007 OTS Collision Rankings

FIGURE 22
2007 Pedestrian Injury Collisions Per Walk Trips to Work
California Cities with more than 250,000 Population

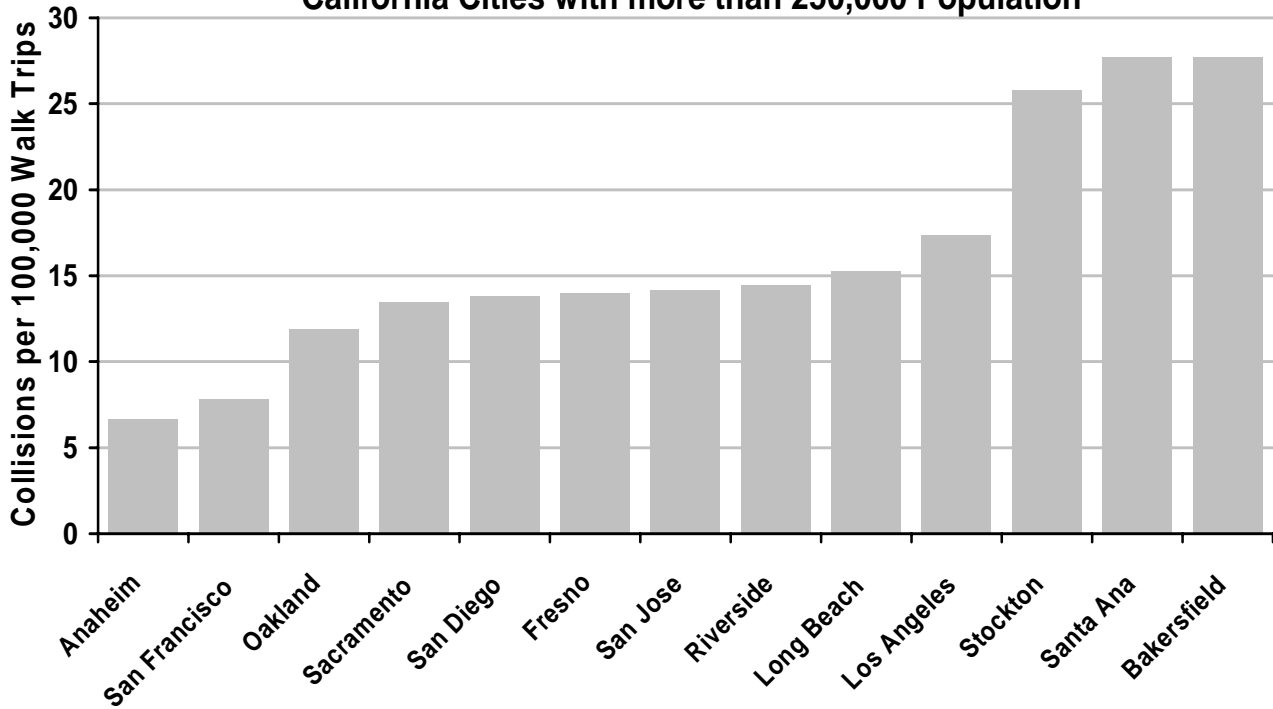


Figure 22: 2007 Pedestrian Injury Collisions per Walk Trips to Work
California Cities with more than 250,000 Population

City	Walking work mode split	Estimated annual work walk trips	Pedestrian Injury Collisions per 100,000 work walking trips
Anaheim	2.56%	1,047,289	6.7
San Francisco	9.66%	10,491,404	7.8
Oakland	5.18%	2,184,525	11.9
Sacramento	3.43%	1,795,800	13.5
San Diego	2.65%	4,292,661	13.8
Fresno	2.03%	1,030,082	14.0
San Jose	1.96%	2,253,875	14.2
Riverside	1.72%	621,804	14.5
Long Beach	3.64%	1,947,014	15.3
Los Angeles	3.68%	16,720,650	17.4
Stockton	2.01%	588,693	25.8
Santa Ana	1.37%	537,593	27.7
Bakersfield	1.01%	349,879	27.7

Sources: U.S. Census Bureau, 2007 American Community Survey; California Office of Traffic Safety, 2007 OTS Collision Rankings

PART 9: OTHER FACTORS INFLUENCING COLLISION TRENDS

This report has highlighted important actions that the City has taken and will continue to take to reduce collision frequency at specific locations. Broader city and regional collision trends, however, are highly influenced by other non-engineering factors such as demographics, vehicular technology, cultural changes, and economic incentives that affect the amount and type of driving people engage in.

At the state level, changes can be made to laws and fines that can over time change driver behavior. For example, the State of California approved the creation of a double fine zone on Van Ness and 19th Avenues last year, which went into effect at the start of 2009. In the past, California has approved the use of automated equipment for red light camera enforcement, or raised the fines for key driving violations. More recently, legislation in Sacramento has sought to reduce incidences of distracted driving caused by cell phones. Distracted driving is difficult to ascertain after a crash and is thus not consistently reported, but efforts to increase driver attention should be helpful.

All levels of government can also play a role disseminating information about the toll that traffic collisions can have on society. Local and national educational efforts can over time result in diminished acceptance of unsafe behavior. Coordinated campaigns against drunk driving or promoting the use of seat-belts, for example, have been linked to decreases in the number of injuries from collisions.

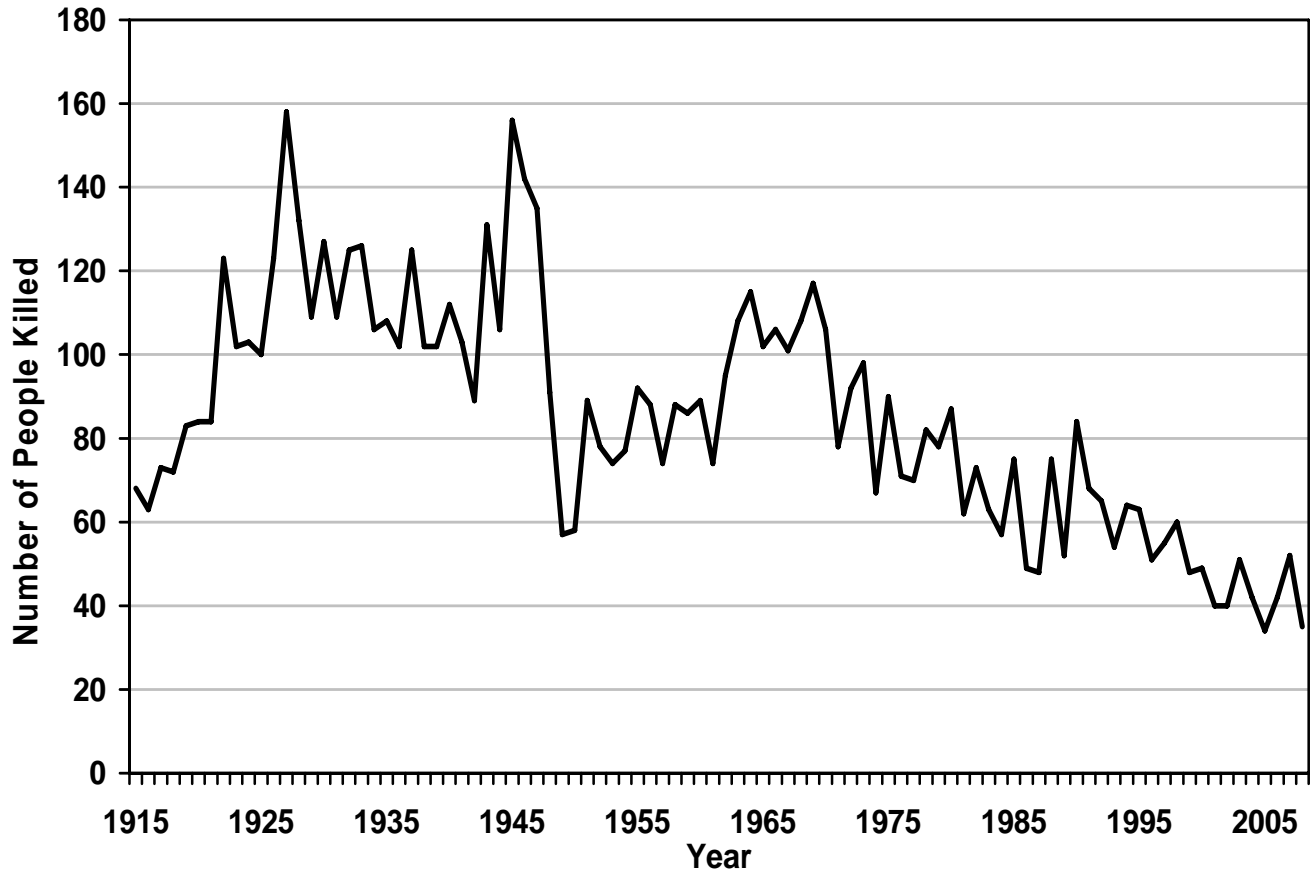
Economic factors can influence the number and mode of transportation trips, which in turn can affect a region's safety statistics. During the past two years there have been reports that increased gas prices appeared to be having the effect of reducing vehicular miles driven and thus reducing total collisions reported across the country.⁵ The National Highway Traffic Safety Administration reported fatal collisions for the United States were down almost 10 percent from the total reported in 2007, reaching their lowest level since 1961.⁶ Higher gas prices, increases in unemployment, and drops in economic activity are all part of the complex mix of factors that affect a region's transportation activity and the collisions that result from such activity.

Given the continuing effect of these and other global factors, it is difficult to predict exactly how San Francisco's overall collision totals will change in the coming years. What is certain is that continued education, engineering and enforcement efforts are required to make San Francisco's streets safer for everyone.

⁵ See for example "Road Deaths Fell Sharply in 2008," The New York Times, April 7, 2009.

⁶ "2008 Traffic Safety Annual Assessment – Highlights," NHTSA, June 2009.

**APPENDIX A
All Traffic Fatalities for San Francisco County
(Includes Street, Highway and Freeway Collisions)
1915 through 2008**



Year	1915	1925	1935	1945	1955	1965	1975	1985	1995	2005	2008
Total	68	100	108	156	92	102	90	75	63	34	35

Sources: "The Street Traffic Control Problem of San Francisco," Miller McClintock, 1927, Table 10.
 "San Francisco City-Wide Traffic Survey," Miller McClintock, 1937, Table 156.
 California Highway Patrol (SWITRS)

APPENDIX B
Intersection with Highest Injury Collision Total for Each Year
1995 through 2007
With 2008 Injury Collisions for Comparison

Year	Main Street	Cross Street	Each Year's Injury Collisions	2008 Injury Collisions
1995	19 th Avenue	Sloat Boulevard	18	4
1996	6 th Street	Bryant Street	16	1
1997	6 th Street	Brannan Street	16	3
1998	7 th Street	Mission Street	15	2
1998	8 th Street	Harrison Street	15	3
1998	Franklin Street	Geary Street	15	2
1999	7 th Street	Brannan Street	14	2
1999	19 th Avenue	Lincoln Way	14	3
2000	4 th Street	Harrison Street	14	3
2001	Fell Street	Masonic Avenue	11	5
2002	7 th Street	Mission Street	13	2
2003	Divisadero Street	Geary Boulevard	9	6
2004	18 th Street	Mission Street	9	4
2005	9 th Street	Harrison Street	10	6
2006	Oak Street	Octavia Boulevard	14	4
2007	Gough Street	Market Street	9	1