Priority Level Three: Pedestrian

Review Draft

Walking is a critical component of the transportation system, and keeping pedestrians safe is a priority. Almost all Washingtonians are pedestrians at one time or another—going to school or work, running errands, recreating, and connecting with transit or other services. Walking can improve the quality of life by reducing traffic congestion, improving personal health, and reducing pollutants into the environment. For some without access to vehicles, particularly children and older citizens, walking is a necessity.

Creating livable communities that increase the safety of walking for all citizens is becoming increasingly important. Making transportation investments which reduce pedestrian deaths and injuries, while making walking comfortable and convenient, will be key to achieving these communities.

Pedestrian Fatalities

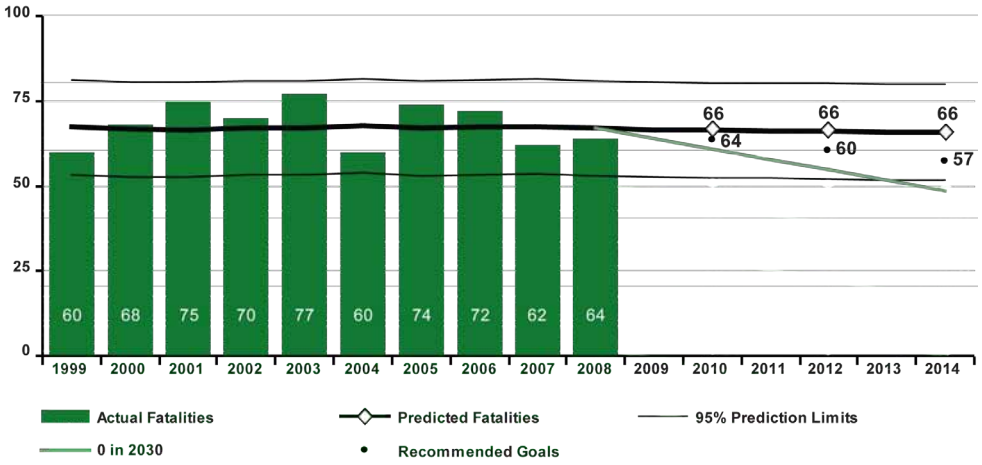
In Washington State there were a total of 682 fatal pedestrian collisions between 1999 and 2008, accounting for 11% of all traffic deaths. Sixty-four pedestrians were killed in 2008, up slightly from 62 in 2007, yet still lower than the 10-year average of 68 fatalities. Based on jurisdiction, 41.8% of pedestrian deaths occurred on city streets, 38.4% on state roads, and 19.4% on county roads. The number of pedestrian fatalities has generally trended downward over the years due to an overall decrease in walking, yet the fatality rate remains high in many urban areas and for specific segments of the population.

Certain parts of the population are more vulnerable to pedestrian fatalities. From 1999 to 2008, more than 70% of pedestrian fatalities occurred in urban areas, while 21% were rural[1]. The elderly are disproportionately represented and have been identified as at-risk populations for pedestrian-involved fatal collisions.

Currently, adults age 65 and older in Washington represent 12% of the population, yet they make up approximately one-fourth of the state's pedestrian deaths. Older adults often walk more, as indicated by the National Institute of Aging, which also reports that more than one in five adults age 65 and older do not drive. This segment of the population is growing both nationally and within our state. By 2020, over one and a half million people in Washington State will be 65 or older – almost twice the number of people in that age group today. Addressing issues that imperil older pedestrians is crucial to reducing our state's traffic fatality rate.

Although they are low in pedestrian fatalities based on population rate, children are also considered a vulnerable pedestrian population. In Washington, pedestrian injuries remain the third leading cause of injury deaths for children ages one to 16, according to the Department of Health. Children are often on foot because it is their only independent means of transportation. Typically, children under the age of 13 cannot accurately determine the speed of an approaching vehicle, a limitation which makes them more vulnerable to being hit than other age groups.

Pedestrian Fatalities: Trends, Forecasts, and Goals



Source: Washington Traffic Safety Commission - Fatality Analysis Recording System

[1] The remaining 9.4% had an unknown roadway classification.

Review Draft

Impairment and Speed as Factors in Pedestrian Fatalities

Roughly half of the pedestrian fatalities that occurred between 1999 and 2008 involved alcohol or other drugs, either on the part of the pedestrian or driver. In 39% of the cases, the pedestrian was impaired; in 4% of the cases, the driver was impaired; and in 5% of the cases, both driver and pedestrian were impaired. The remaining 53% of fatalities involved no impairment on the part of either the pedestrian or the driver.[1] Of the pedestrian fatalities occurring between midnight and 6 am, over two-thirds involved alcohol or drug impairment.

Speed is also a major factor contributing to the severity of pedestrian-vehicle crashes. Studies have shown that a small increase in speed has a large effect on pedestrian fatality risk. Anderson et al. (1997) estimated the probability of a pedestrian being fatally injured at various impact speeds as a function of injury severity scores. One in ten (10%) pedestrians struck by a vehicle traveling 23 mph is likely to be fatally injured. About six out of 10 (58%) of pedestrians struck by a vehicle traveling 28 mph would be fatally injured – nearly a six-fold increase in fatality risk resulting from only a five-mph increase in vehicle speed. Speeding was a factor in 8.4% (28 of 332) of pedestrian deaths between 2004 and 2008.

Addressing Pedestrian Safety in Target Zero

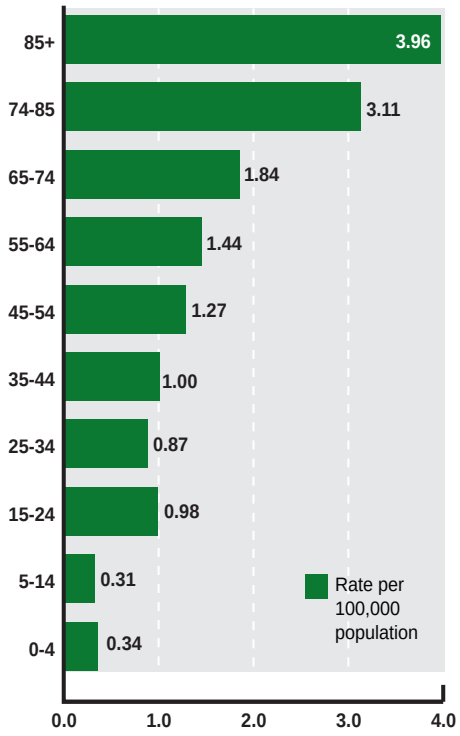
Pedestrian safety strategies focus on three of the four "E's": Education, Enforcement, and Engineering (EMS strategies are generally applicable across all types of collisions, both pedestrian and motor-vehicle-related, and can be found on page XX). Some of these strategies include:

- Education approaches targeting both pedestrians and motorists focus on impairment, school zone safety, and reflective apparel, among other items.
- Enforcement efforts addressing driver and walker behavior in crosswalks and school zones.
- Engineering solutions focusing on roadway improvements such as better lighting, traffic calming features, and "refuge" islands for pedestrians in the median.

[1] Numbers do not add up to 100% due to rounding.

Pedestrian Fatalities

By Age Range, 1999-2008



Source: Washington Traffic Safety Commission - Fatality Analysis Recording System (FARS)

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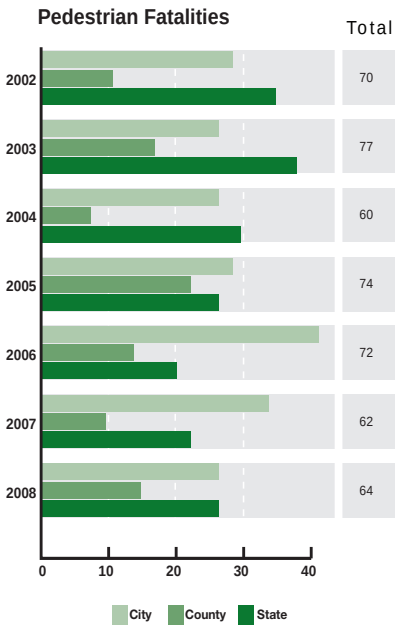
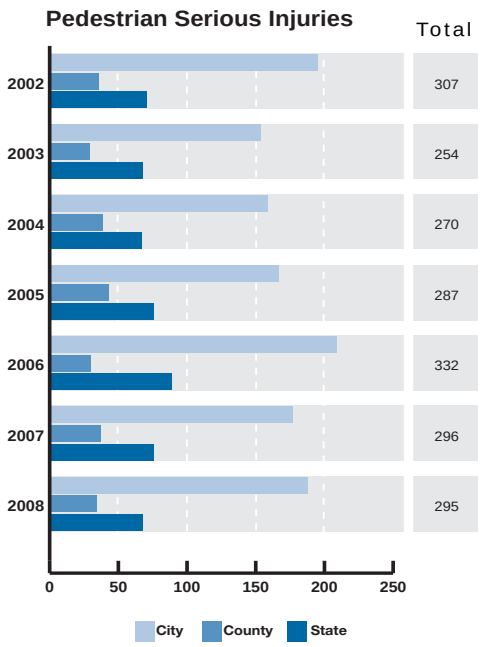
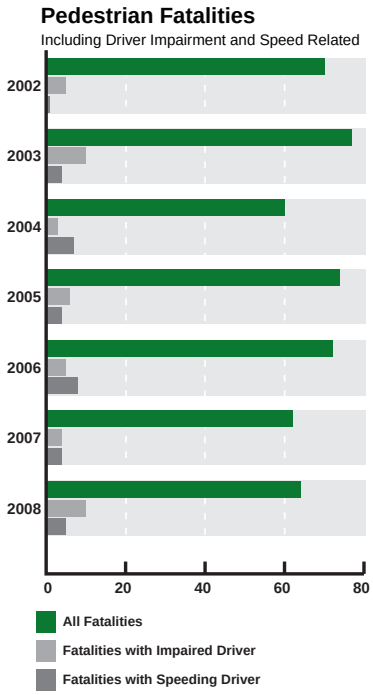


Source: Washington Traffic Safety Commission - Fatality Analysis Recording System

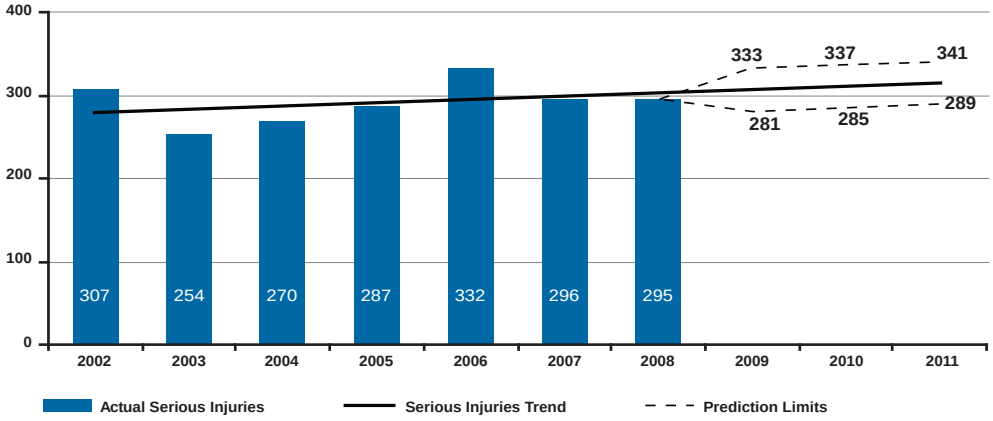


Source: WSDOT Collision Database



Source: Washington Traffic Safety Commission - Fatality Analysis Recording System (FARS)

Pedestrian Serious Injuries: Trends and Forecasts



Source: WSDOT Collision Database

Review Draft

3.3 Strategies to Reduce Collisions Involving Pedestrians	
3.3.A. Improve Pedestrian and Motorist Safety Awareness and Behavior	3.3.A1. Continue to provide education, outreach, and training (P) • Distribute School Zone Safety Curriculum Kit and Resource Guide and the School Administrator's Guide the School Walk Routes and Student Pedestrian Safety. • Utilize community traffic safety task forces to address pedestrian safety issues. (P) • Implement programs (engineering, enforcement and education) to influence impaired pedestrians. Solutions for improving the built environment should focus on appropriate zoning, crossing treatments and other safety improvements near high speed, high volume, multilane arterials. • Promote use of reflective apparel • Ensure that transportation agencies are following national guidelines on the use of reflective markings and sign materials
	3.3.A2. Expand enforcement campaigns. (P) • Expand cross walk enforcement and education for both vehicles and pedestrians. • Improve academy and in-service pedestrian safety education for law enforcement officers at State, tribal, and local levels, including pedestrian collision investigation training. • Encourage mobile camera enforcement in school zone • Continue Targeted Crosswalk Enforcement (P)
3.3.B. Improve Pedestrian Facilities.	3.3.B1. Update existing and develop design guidance for the for the safe accommodation of pedestrians. (P)
	3.3.B2. Develop programs to improve pedestrian safety accommodations at intersections and interchanges. (P)
	3.3.B3. Implement pedestrian safety programs targeting pedestrian crash concerns in major urbanized areas and select rural areas with the construction of additional pedestrian facilities. (P) • Provide safer crossings by installing refuge islands, lighting, pedestrian lead interval at signals and shortening of crossing distances. . • Reduce pedestrian exposure to vehicular traffic. • Improve sight distances and/or visibility between motor vehicles and pedestrians; move the stop bar farther back. • Reduce vehicle speeds through traffic calming features in urban centers where appropriate
	3.3.B4. Maintain lights that increase pedestrian lighting
3.3.C Improve safety for children walking to school.	3.3.C1 Maintain dedicated school zone safety funding and encourage enforcement of school zone traffic laws. (P)
	3.3.C2 Continue WSDOT's safe routes to school grant opportunities. (P)
	3.3.C3 Install computer controlled and timed school zone flashing lights at K-12 schools where appropriate. (P)
3.3.D. Improve Data and Performance Measurers	3.3.D1. Inventory existing pedestrian infrastructure and identify deficiencies. (P)

P=Proven, T=Tried, E=Experimental