

DANGEROUS BY DESIGN 2011



ARIZONA

Solving the Epidemic of Preventable Pedestrian Deaths
(And Making Great Neighborhoods)



Dangerous by Design 2011: Arizona

Between 2000 and 2009, 1,479 people were killed while walking in Arizona. This is a share of the more than **47,700** Americans who died on our streets and roads, whether walking to school, approaching a bus stop, or strolling to the grocery store. Children, older Americans, and racial and ethnic minorities were killed in disproportionate numbers. An overwhelming proportion of these deaths share a common thread: they occurred along “arterial” roadways that were **dangerous by design**, streets engineered for speeding cars with little or no provision for people on foot, in wheelchairs or on bicycles.

Nationwide, pedestrians account for nearly **12 percent** of total traffic deaths. But state departments of transportation have largely ignored pedestrian safety from a budgetary perspective, allocating only **1.5 percent** of available federal funds to projects that retrofit dangerous roads or create safe alternatives.¹

The good news is that communities choosing to prioritize pedestrian safety and invest in safer designs see fewer deaths and injuries, while improving quality of life.

In recent years, scores of communities began retrofitting poorly designed roads to become “complete streets” by adding sidewalks and bicycle lanes, reducing crossing distances and installing crosswalks to make walking and biking safer and more inviting for users of all ages and abilities. Though growing in number, communities that have completed their streets remain the exception rather than the rule, placing Arizona’s pedestrians in continued danger.

Since the 1950s, states have used federal dollars on the vast network of federal-aid roadways that are some of the most dangerous places for walking today. As Congress debates legislation that will set transportation investment priorities for the next six years, policymakers have an opportunity to ensure that federal dollars are allocated to make roads safer for everyone who uses them. As this report demonstrates, many pedestrian injuries and deaths — as well as those of motorists — are preventable with low-cost design features and retrofits.

- **1,479** pedestrians were killed in Arizona from 2000 to 2009.
- **67 percent** of all pedestrian fatalities occurred on roads that are eligible to receive federal funding for construction or improvement, with federal guidelines or oversight for their design.
- Especially when combined with unsafe street and road design, vehicle speed presents a deadly threat to pedestrians. Nearly **60 percent** of pedestrian fatalities from 2000 to 2009 occurred on roads with speed limits of 40 mph or greater. Pedestrians have only a **15 percent chance** of surviving a collision with a car traveling 40 mph.

¹ Federal funds categorized as a bicycle or pedestrian improvement type. Includes funds for sidewalks, bicycle paths and lanes, crosswalks, and other projects or programs that improve existing, or provide new infrastructure, or promote safe walking and bicycling. Data is derived from the Federal Highway Administration's Fiscal Management Information System for the fiscal years 2005 through 2008.

- Too many arterial roads, even in urban areas, are simply not designed to accommodate pedestrians or lack sidewalks altogether. Of the 47,452 pedestrian fatalities in the U.S. from 2000-2009 for which location of the collision is known, more than **40 percent** were killed where no crosswalk was available. Just **ten percent** of pedestrian fatalities occurred inside a crosswalk.
- African-Americans and Hispanics are disproportionately represented in pedestrian fatalities. In Arizona from 2000 to 2007, **1.7** non-Hispanic whites died per 100,000 people. Hispanics suffered an average pedestrian fatality rate of **3.45** and African-Americans a rate of **2.34** per 100,000 persons. **332** Hispanics, **37** African-Americans, **11** Asian and **524** non-Hispanic white persons were killed in this period.
- **188** pedestrians in Arizona aged 65 years or older were killed from 2000-2007. Older pedestrians died at a rate of **3.2** per 100,000 residents in Arizona, compared to **2.5** per 100,000 for residents under age 65, ranking **11th** nationally for fatality rate for pedestrians over the age of 65.
- Pedestrian injury is the third leading cause of death by unintentional injury for children 15 and younger, according to CDC mortality data. **94** children 15 years and younger were killed while walking in Arizona from 2000 to 2007.
- Arizona's overall Pedestrian Danger Index (PDI) of **113.1** ranks **6th** nationally, though assessing risk locally at the metro or county level with the data that follows can help provide a much fuller picture of the danger to pedestrians.

Why pedestrian safety is in the federal interest

For decades, federal dollars have been invested in thousands of miles of state and local highways. There has been a debate brewing in the 112th Congress about what constitutes the “federal interest” in transportation. Pedestrian safety is often perceived as a strictly local issue, but **67 percent of all 47,000+ pedestrian fatalities from 2000-2009 occurred on federal-aid roadways** — roads eligible to receive federal funding for construction and improvements with federal guidelines or oversight for design. Taxpayer money that goes to the federal government and is distributed to states for transportation should be used to build streets, roads and highways that are safe for all users. With millions of Americans walking along and crossing these federally funded roads each day, the millions in federal dollars spent on them each year must result in safer conditions for pedestrians.

Measuring relative risk to pedestrians

Researchers at the Surface Transportation Policy Partnership in the 1990s developed the **Pedestrian Danger Index (PDI)** in order to establish a level playing field for comparing metropolitan areas based on the danger to pedestrians. The PDI corrects for the fact that the cities where more people walk on a daily basis are likely to have a greater number of pedestrian fatalities by computing the rate of pedestrian deaths relative to the amount of walking. The PDI shows that the most dangerous places to walk are those that fail to make smart infrastructure investments that make roads safer for everyone.

Data comes from the National Highway Traffic Safety Administration's (NHTSA) Fatality Analysis Reporting System (FARS).

Arizona Metros over 1 million, ranked by PDI (most to least dangerous)

National PDI Rank	Metro Area	Average % of Workers Walking to Work	Total Pedestrian Fatalities (2000-2009)	Pedestrian Danger Index
8	Phoenix-Mesa-Scottsdale, AZ	1.7%	867	132.4
25	Tucson, AZ	2.7%	212	84.7

Western metros over 1 million, ranked by PDI (most to least dangerous)

Regional PDI Rank	Metro Area	Average % of Workers Walking to Work	Total Pedestrian Fatalities (2000-2009)	Pedestrian Danger Index
1	Riverside-San Bernardino-Ontario, CA	1.8%	938	139.2
2	Las Vegas-Paradise, NV	1.9%	421	135.2
3	Phoenix-Mesa-Scottsdale, AZ	1.7%	867	132.4
4	Sacramento--Arden-Arcade--Roseville, CA	2.1%	377	90.7
5	Tucson, AZ	2.7%	212	84.7
6	Los Angeles-Long Beach-Santa Ana, CA	2.6%	2,533	76.0
7	San Diego-Carlsbad-San Marcos, CA	2.8%	623	74.7
8	Denver-Aurora, CO	2.3%	397	74.3
9	San Jose-Sunnyvale-Santa Clara, CA	2.3%	274	68.4
10	Salt Lake City, UT	2.1%	131	60.2
11	San Francisco-Oakland-Fremont, CA	4.3%	685	38.5
12	Portland-Vancouver-Beaverton, OR-WA	3.2%	243	36.3
13	Seattle-Tacoma-Bellevue, WA	3.5%	398	35.9

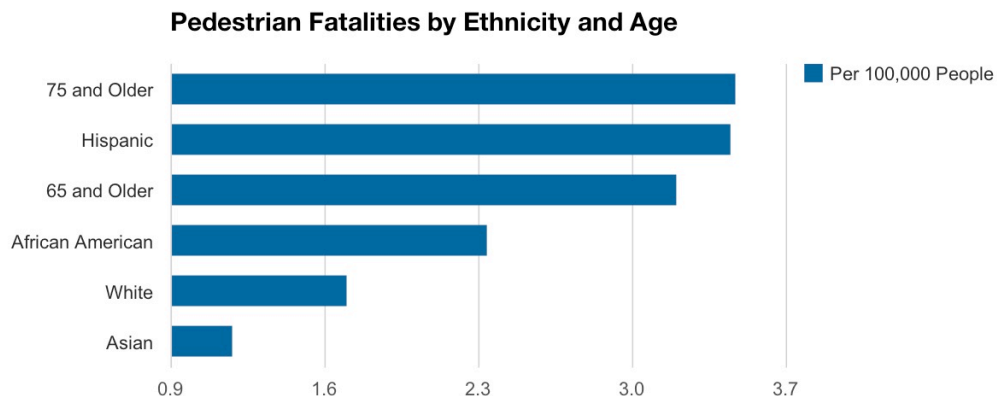
Arizona Counties with highest fatality rate (unadjusted for amount of walking)

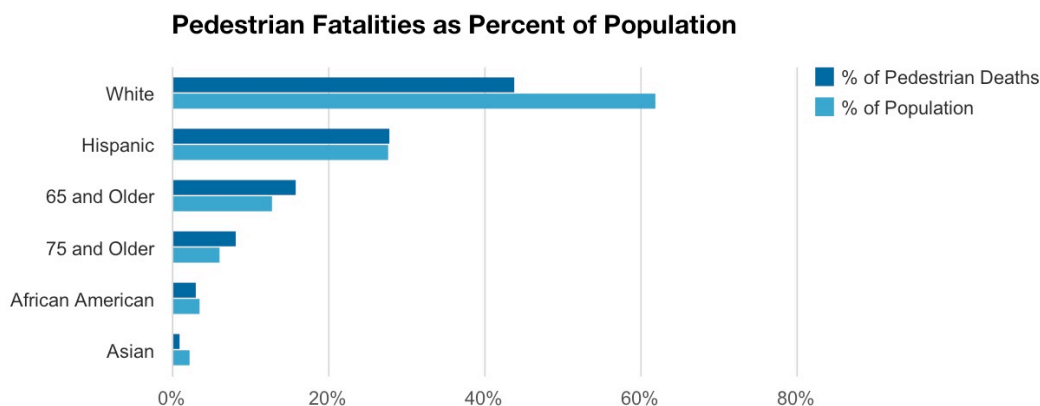
	County	Total number of pedestrian fatalities (2000-2009)	Percent of traffic deaths that were pedestrians (average 2000-2009)	Average Pedestrian Fatality Rate (per 100,000)
1	La Paz County	13	4.8%	6.54
2	Apache County	45	10.3%	6.53
3	Navajo County	66	14.6%	6.23
4	Coconino County	67	11.4%	5.42
5	Graham County	12	11.9%	3.53
6	Pinal County	66	7.9%	2.74
7	Mohave County	50	9.1%	2.74
8	Gila County	14	6.8%	2.71
9	Santa Cruz County	10	10.5%	2.44
10	Pima County	212	15.9%	2.31

****Counties with fewer than 5 fatalities are omitted from this table due to an unreliable impact on rate.**

*****Fatality rate is a measure of the number of pedestrian deaths relative to population. Pedestrian fatality rate is expressed in deaths per 100,000 individuals per year; thus, a pedestrian fatality rate of 5.0 in a county with a population of 100,000 would mean 5 deaths on average per year in the county each year from 2000-2009.**

Pedestrian fatalities disproportionately affect minorities





Now is the time for Congress to act

Congress is currently drafting a multi-year federal transportation bill that will guide the funding priorities for states and cities. Now more than ever, there is a clear need for strong leadership, greater resources for pedestrian safety and more accountability from states on how those funds are spent. There is strong evidence that greater resources need to be dedicated for projects and programs that promote and improve pedestrian safety. Streets designed for speed and not for people in communities across the U.S. lead to these preventable pedestrian deaths. Now, we must call on Congress to change transportation funding and policy to make roads that are safe for everyone.

We recommend that the next federal transportation spending bill include the following provisions:

- **Retain dedicated federal funding for pedestrians and bicyclists.** Congress is currently contemplating elimination of dedicated funding for Transportation Enhancements and the Safe Routes to School program, the two largest funding sources for bike and pedestrian facilities. Without these committed funding streams, states will likely reduce spending for safety features like sidewalks, crosswalks and trails.
- **Adopt a national complete streets policy.** Ensure that all federally funded road projects take into account the needs of all users of the transportation system, including pedestrians, bicyclists, and public transportation users, as well as children, older adults, and individuals with disabilities.
- **Fill in the gaps.** Beyond making new and refurbished roads safer for pedestrians, we need to create complete networks of sidewalks, bicycle paths, and trails so that residents can travel safely throughout an area.

- **Commit a fair share for safety.** In 2008, only two states spent any of their Highway Safety funding to improve infrastructure for bicycling and walking. Yet, pedestrians and bicyclists make up 14 percent of all traffic-related fatalities. Federal, state, and local governments should set safety goals that not only reduce fatalities overall, but reduce fatalities for individual modes, with separate safety goals for pedestrians, bicyclists, motorcyclists, and motorists.
- **Hold states accountable for creating communities that are safe for walking.** Congress must hold states accountable to ensure that transportation funds are spent wisely, by ensuring that:
 - New streets are built to be safe for pedestrians, bicyclists, public transportation users, and motorists alike;
 - The most dangerous roads are retrofitted for safety; and,
 - Federal safety dollars result in lives saved and a more active population.