2019 DANGEROUS BY DESIGN

Smart Growth America
Improving lives by improving communities

National Complete Streets Coalition

SMART GROWTH AMERICA is a national organization dedicated to researching, advocating for, and leading coalitions to bring better development to more communities nationwide. From providing more sidewalks to ensuring that more homes are built near public transportation or that productive farms remain a part of our communities, smart growth helps make sure people across the nation can live in great neighborhoods. Learn more at www.smartgrowthamerica.org.

The **NATIONAL COMPLETE STREETS COALITION,** a program of Smart Growth America, seeks to fundamentally transform the look, feel, and function of the roads and streets in our communities, by changing the way most roads are planned, designed, and constructed. Complete Streets policies direct transportation planners and engineers to consistently design with all users in mind. Learn more at www.smartgrowthamerica.org/complete-streets.

EXECUTIVE SUMMARY

Between 2008 and 2017, drivers struck and killed 49,340 people who were walking on streets all across the United States. That's more than 13 people per day, or one person every hour and 46 minutes. It's the equivalent of a jumbo jet full of people crashing—with no survivors—every single month.

In the past decade, the number of people struck and killed while walking increased by 35 percent. 2016 and 2017 were the two highest years since 1990 for the number of people who were killed by drivers while walking.

This report ranks states and metropolitan areas around the country using our "Pedestrian Danger Index", or PDI. This index measures how deadly it is for people to walk based on the number of people struck and killed by drivers while walking, controlling for the number of people that live in that state or metro area and the share of people who walk to work. The 2019 edition of *Dangerous by Design* includes traffic deaths that occurred between 2008 and 2017 from the Fatality Analysis Reporting System (FARS), a national database of all fatal traffic crashes.

What this report shows is that our streets aren't getting safer. Even more so, while traffic deaths impact every community in the United States, states and metropolitan areas across the southern continental United States, older adults, people of color, and people walking in low-income communities bear a higher share of this harm.

Why is this happening? We're not walking more, and we're only driving slightly more than we were back in 2008. What is happening is that our streets,

which we designed for the movement of vehicles, haven't changed. In fact, we are continuing to design streets that are dangerous for all people. Furthermore, federal and state policies, standards, and funding mechanisms still produce roads that prioritize high speeds for cars over safety for all people.

To reverse this trend and save lives, we need to protect all users of the transportation system through our policies, programs, and funding.
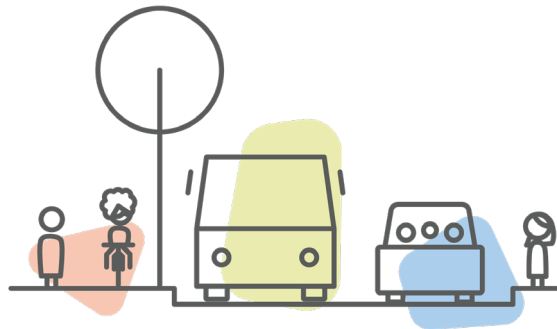
Federal funds, policies, and standards helped to create this problem and have a role in improving the streets we build tomorrow.

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THE TOP 20
Most Dangerous Metropolitan Areas for Pedestrians
(2008-2017)

🔴 Top 1-10   🟠 Top 11-20

18 Detroit-Warren-Dearborn

7 Bakersfield

Albuquerque 17

Little Rock-North Little Rock-Conway 19

11 Memphis

15 Greenville-Anderson-Mauldin

20 Augusta-Richmond County

13 Birmingham-Hoover

10 Jackson

6 Jacksonville

Baton Rouge 12

2 Deltona-Daytona Beach-Ormond Beach

Orlando-Kissimmee-Sanford 1 3 Palm Bay-Melbourne-Titusville

Tampa-St. Petersburg-Clearwater 9 5 Lakeland-Winter Haven

North Port-Sarasota-Bradenton 4

Cape Coral-Fort Myers 8 14 Miami-Fort Lauderdale-West Palm Beach

16 McAllen-Edinburg-Mission

Our federal government needs to take the lead on prioritizing safer streets. Federal dollars and policies helped create these unsafe streets in the first place. And federal funds, policies, and guidance have a significant role to play in fixing these streets and in designing the streets we'll build tomorrow.

We call on Congress to adopt a strong, federal Complete Streets policy that requires state departments of transportation (DOTs) and metropolitan planning organizations (MPOs) to consistently plan for all people who use the street, including the most vulnerable users.

We call on state DOTs and MPOs to put people first and give their organizations the tools and training they need to create transportation networks that serve all users.

We call on the over 1,400 communities that have adopted a Complete Streets policy to turn their vision into practice and implementation.

And we call on you to demand safer streets from the elected officials in your communities.

3

INTRODUCTION

Between 2008 and 2017, drivers struck and killed 49,340 people while they were walking throughout the United States.[1] That's more than 13 people per day, or one person every hour and 46 minutes. It's the equivalent of a jumbo jet full of people crashing—with no survivors—every single month.

Unlike traffic fatalities for motor vehicle occupants, which decreased by 6.1 percent from 2008 to 2017, pedestrian deaths have been steadily rising since 2009. In 2015, 5,494 people died while walking, an unprecedented increase of 11.9 percent compared to the previous year. In 2016, pedestrian deaths rose by another 10.6 percent to 6,080. Deaths declined slightly in 2017 to 5,977, but this is nothing to celebrate—it's still the second highest body count on record since 1990.[2]

"How do we shift safety culture? One fatality on a U.S. air carrier in nine years, and everyone in this room knew about it. So why do we under-react to hundreds of tragic deaths every day on our roads?"

-Deborah Hersman, former President & CEO, National Safety Council

Pedestrian Fatalities and Vehicle Miles Traveled (VMT)
(2008-2017)
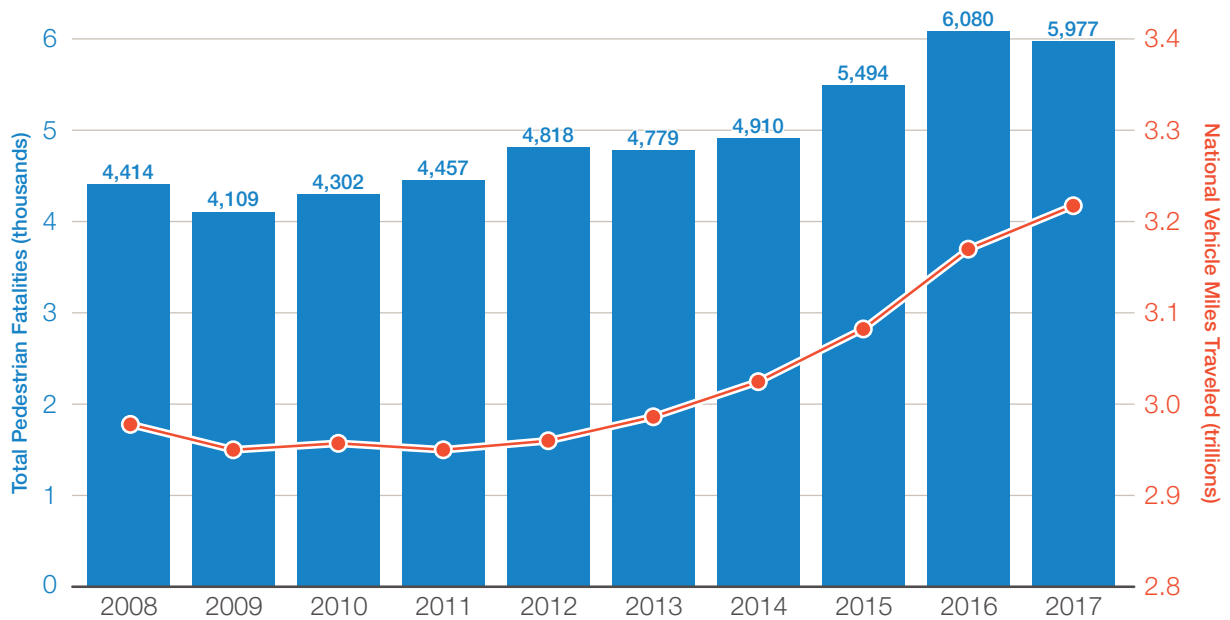
WHY IS THIS HAPPENING?
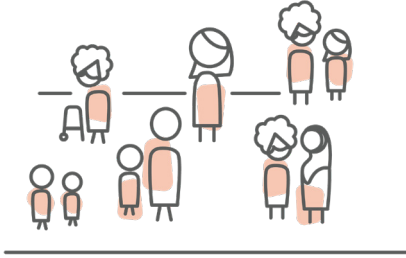
ARE WE WALKING MORE? Not really. Although individual cities and metropolitan areas have observed increased walking rates, the share of trips made by walking nationwide barely increased from 2009 to 2017 according to the National Household Travel Survey, and the total number of all trips, including walking trips, decreased during this time.[3]
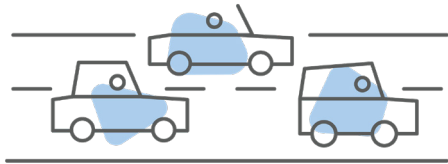
ARE WE DRIVING MORE? Vehicle Miles Traveled (VMT), or the total amount of driving we do as a nation each year, has gradually increased since 2011. However, as shown in the chart on the previous page, VMT in 2017 was only 8.1 percent higher than it was in 2008 before the economic recession, but the number of people struck and killed by drivers while walking rose by more than a third during this time period and is higher now than it's been in nearly three decades.[4,5]

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BY THE NUMBERS
From 2008 to 2017:
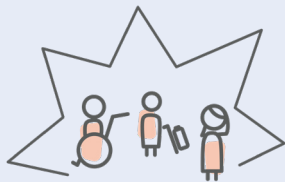
Pedestrian deaths **increased** by

↑ **35.4%**

Vehicle miles traveled **increased** by

↑ **8.1%**
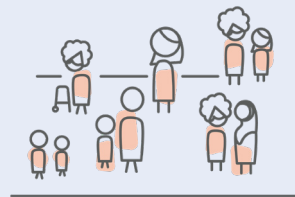
Walking as a share of all trips **increased** by

↑ **less than 1%***

Traffic deaths among motor vehicle occupants **decreased** by

↓ **6.1%**

*from 2009 to 2017

WHAT'S GOING WRONG?

We continue to design streets that are dangerous for all people, not just because we keep repeating the same mistakes, but because our federal policies, standards, and funding mechanisms that have been in place for decades produce dangerous roads that prioritize high speeds for cars over safety for all people.

Additionally, more people are driving cars that the National Highway Traffic Safety Administration (NHTSA) has determined to be notoriously dangerous for people walking. According to a 2015 NHTSA report, SUVs (sport utility vehicles) and pickup trucks are two to three times more likely than smaller personal vehicles like sedans to kill people walking in the event of a crash. A recent Detroit Free Press article observed that SUV sales have climbed steadily since 2012, surpassing sedans as the best-selling type of vehicle nationwide as of 2014.[6,7]

This year, Congress has a major opportunity to reshape our mobility future as they begin the work of reauthorizing our federal transportation bill in 2020. To address our continuing safety problems, they must create policies that change the way we fund, design, and measure the success of our streets nationwide to make sure the safety of all people who use the street including people walking, is our highest priority.
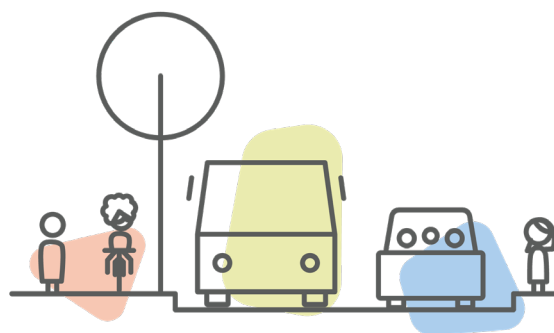
Our federal government needs to take the lead on prioritizing safer streets. Federal dollars and policies helped create these unsafe streets in the first place. And federal funds, policies, and standards have a significant role to play in fixing these streets and in designing the streets we'll build tomorrow.

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We need a strong federal Complete Streets policy that requires state departments of transportation to consistently plan for all people who use the street, including the most vulnerable users. Federal policy must also open the door for flexible guidance to allow planners and engineers to make innovative decisions about how to design roadways to accommodate all users. We need performance measures that ensure states set targets that require progress toward creating safer streets and hold them accountable for achieving reductions in serious injuries and fatalities, penalizing them for failing to meet those targets. And we also need more high quality data on the street conditions where fatalities occur and on traffic-related injuries nationwide to help us better diagnose and solve the problem.

Funding is a first step. But not the last.
As long as the federal government continues to invest the lion's share of our transportation funding in building, maintaining, and widening streets for cars instead of creating safer streets for people, we will continue to see more people being killed while walking. National policy must reflect safety as a higher priority. This will result in the reallocation of our current spending to invest in safety for all users and help to establish dedicated funding programs for projects to support walking, biking, transit, and other modes of transportation.

Emerging technologies such as automated vehicles (AVs) aren't the answer either. These technologies are not going to solve our safety problems for us, especially not when it comes to the safety of people walking. AVs may not always be able to reliably detect people walking and biking. Additionally, under pending federal legislation, states and cities will have little to no oversight over how these technologies are deployed within their own communities.

"ACCEPTABLE" DEATHS?

Many states—including 10 of the 20 most dangerous for people walking—planned for more pedestrian deaths in 2018 than 2017.

Under the Federal Highway Administration's Highway Safety Improvement Program (HSIP), state departments of transportation were required to set performance targets for traffic fatalities and serious injuries and then monitor their progress over time. Unfortunately, a closer look at these targets reveals just how low the bar is for safety in many states which are setting targets that would actually increase pedestrian fatalities.

In 2017, states updated their safety goals for 2018, including setting target numbers for deaths and serious injuries among people walking, biking, or using other non-motorized forms of travel. 18 states established targets for non-motorized deaths and injuries that are higher than the number of people killed or injured in the most recent year of data reported. Ten of these 18 states—Alabama, Arkansas, California, Delaware, Florida, Kentucky, Michigan, Missouri, Nevada, and Oklahoma—are among the top 20 most dangerous states for people walking.

The only "acceptable" number of deaths on our roadways is zero, but every single state—whether seeking to marginally reduce pedestrian deaths and injuries or allow them to continue climbing unabated—established a target for "success" that allows these preventable deaths to continue or even increase.

We can and must raise the bar by requiring states to set safety targets that reduce rather than increase the number of people killed or seriously injured while walking or biking on our streets, ultimately working toward eventually eliminating all traffic-related deaths and serious injuries. However, to make this vision a reality, we need a strong federal policy with binding enforceable requirements that hold states to higher safety standards.

Motor Vehicle Related Fatalities
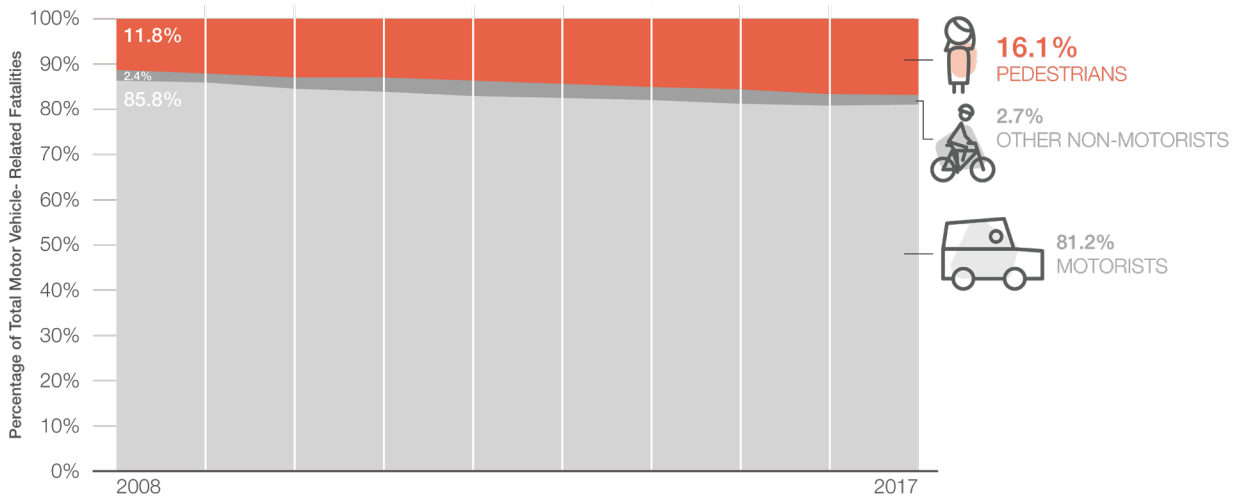
We must make preventing traffic deaths a higher priority nationwide, including for people walking. Of all the people that die in traffic crashes on our roads, people walking now comprise 16.1 percent of all deaths, and as shown above, that share has been consistently growing for more than a decade.[8] Better, faster trauma care and safety improvements for occupants of vehicles ranging from seatbelts to automatic braking and lane departure warnings have played an important role in saving lives on our roadways overall. However, the safer street and vehicle design standards needed to protect people walking have progressed slowly or not at all.

This report ranks the most dangerous states and metropolitan areas across the United States for people walking. It also exposes disparities in which groups of people are most at risk of dying while walking.

Traffic deaths impact every community in the United States, but states and metropolitan areas across the southern continental United States, older adults, people of color, and people walking in low-income communities bear a higher share of this harm.

It is our hope that this report will inspire communities across the country to take action. Policymakers at the federal, state, and local level can and should do more to ensure streets are designed and operated to protect the safety of all people who use them regardless of age, ability, income, race, ethnicity, or mode of transportation.

WHAT CAN BE DONE TO ADDRESS THIS PROBLEM?

It's thankfully not a mystery—we have the recipe in our hands. At the federal level, we need a strong, federal Complete Streets policy as a first major step, but here are **nine** other concrete actions that policymakers, local leaders, engineers, and others can take at the state, metropolitan, or local level.

State actions

1. **Set performance targets that will improve safety.** State (DOTs) must be held accountable for making reductions in serious injuries and fatalities and should be penalized for failing to meet those targets. They certainly shouldn't receive funding for plans to increase fatalities. Read more on page 7.

2. **Prioritize safety over vehicle movement.** Though states might have a long list of goals or objectives for their transportation system, moving vehicles quickly and efficiently and maintaining pavement conditions generally take precedence. One way to make safety a higher priority is to get rid of the "level of service" design metric. Level of service, used by nearly all states, measures the success of a street solely based on vehicle delay. Minimizing vehicle delay as the number one goal often produces the roads that are the most dangerous by design.

This road is **not** congested.
Does that mean it's successful?

3. **Provide state transportation officials and engineers with the most up-to-date training and education on implementing Complete Streets.** In states that have made a policy commitment to Complete Streets, often the professional staff tapped to implement changes lack the knowledge required, or the policies and decision-making frameworks already in place need to be updated to support Complete Streets. At the request of state or city DOTs, the National Complete Streets Coalition (and other programs within Smart Growth America) have provided staff with the training needed to embed Complete Streets in their day-to-day work and make safer projects a reality.

State or local actions

1. **Prioritize projects that will benefit those who suffer disproportionately.** Some groups, including people of color and people walking in lower-income communities, are disproportionately struck and killed while walking. To address this, decision-makers should prioritize the projects that would benefit these vulnerable users. For example, the Nashville Area Metropolitan Planning Organization, when deciding which projects to fund in their selection process, awards extra points to projects that will improve safety for people walking or biking in certain disadvantaged areas.[1]

2. **Embrace the flexibility provided by FHWA to design safer streets.** New design guidance from the Federal Highway Administration (FHWA) in 2016 gave states and cities wide latitude to design streets to best suit local needs and rolled back old regulations that treated all streets and roads like highways. This cleared the way for states, metro areas, and local communities to use federal dollars to design safer streets, yet many states falsely claim that federal guidelines continue to restrict innovative street design.

3. **Design roads to reduce speeds wherever possible.** For people on foot, the likelihood of surviving a crash decreases rapidly as speeds increase past 30 mph. The federal government already knows that excessive speed is a deadly problem in our nation's transportation system—the National Transportation Safety Board recently acknowledged this in a powerful report to FHWA.[2] The current practice of measuring how fast most traffic travels on a road and then setting speed limits so that only 15 percent of the drivers are exceeding that limit results in artificially high speed limits—and unsafe streets for everyone. Rather than designing roads that encourage speeding and then relying upon enforcement, states and cities should design roads to encourage safer, slower driving speeds in the first place.

4. **Pass actionable Complete Streets policies that lay the groundwork for implementation.** The National Complete Streets Coalition's policy framework provides guidance on how to craft a strong policy that sets up clear next steps to embed Complete Streets in routine transportation planning.[3]

5. **Stop referring to pedestrian fatalities as unavoidable "accidents."** City and state leaders should set an example by replacing the word "accident" with "crash" when discussing these preventable deaths. It's a small change that can make a big difference. Read more on page 22.

6. **Test out bold, creative approaches to safer street design.** Poor street design is neither an insurmountable nor expensive problem. Some cities have found success by testing out low-cost, short-term interventions to create safer streets and then measuring the results to gauge the impact of their projects to work toward permanent solutions.[4]

1.   Building Healthy & Prosperous Communities: How metro areas are implementing more and better bicycling and walking projects. Transportation for America. December, 2017. http://t4america.org/maps-tools/healthy-mpos-guidebook/
2.   Safety Study: Reducing Speeding-Related Crashes Involving Passenger Vehicles. NTSB/SS-17/01 PB2017-102341 National Transportation Safety Board. Adopted July 25, 2017. https://www.ntsb.gov/safety/safety-studies/Documents/SS1701.pdf
3.   The Elements of a Complete Streets Policy, Effective 2018. Smart Growth America and the National Complete Streets Coalition. November, 2017. https://smartgrowthamerica.org/introducing-brand-new-grading-framework-complete-streets-policies/
4.   Safety Demonstration Projects: Case studies from Orlando, FL, Lexington, KY, and South Bend, IN. Smart Growth America and the National Complete Streets Coalition. April, 2018. https://smartgrowthamerica.org/resources/safety-demonstration-projects-case-studies-from-orlando-fl-lexington-ky-and-south-bend-in/

THE MOST DANGEROUS PLACES TO WALK

Our "Pedestrian Danger Index", or PDI, calculates how deadly it is for people to walk in a state or metropolitan area based on the number of people struck and killed by drivers while walking, controlling for the number of people that live in that state or metro area and the number of people that walk to work. Calculating PDI in this way corrects for places that may have higher numbers of fatalities simply as a function of higher numbers of people traveling on foot overall, allowing balanced comparisons between very different places. The share of people who walk to work is the best nationally available approximation of the total number of people who walk for all trips.

The 2019 calculations include traffic deaths that occurred between 2008 and 2017 from the Fatality Analysis Reporting System (FARS), a national database of all fatal traffic crashes. Walk to work and population data are taken from the U.S. Census Bureau's 2016 American Community Survey five-year estimates. For age, race, and ethnicity, we calculate a variation of PDI using walking rates from the 2017 National Household Travel Survey in lieu of Census data. Consult the Appendix for a more detailed description of our methodology.

This report calculates PDI for all 50 states (plus Washington, DC) and for the 100 largest census defined metropolitan statistical areas (MSAs) nationwide. However, just because your community does not fall within the top 10 or 20 most dangerous places is not necessarily cause for celebration. Since the previous edition of Dangerous by Design, which looked at pedestrian deaths between 2004 and 2015, PDI scores in the vast majority of states and metropolitan areas nationwide have worsened.

Source: Stephen Lee Davis, SGA

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$$\frac{\dfrac{\text{Pedestrian Deaths}}{\text{Population}}}{\text{Percentage of Walking Trips}} \times 100{,}000 = \text{Pedestrian Danger Index}$$

! Compared to the previous decade of data in *Dangerous by Design 2016*, 39 states and the District of Columbia, and 79 out of the 100 largest metropolitan areas, **have become more dangerous for people walking.**

THE TOP 20
Most Dangerous States for Pedestrians
(2008-2017)
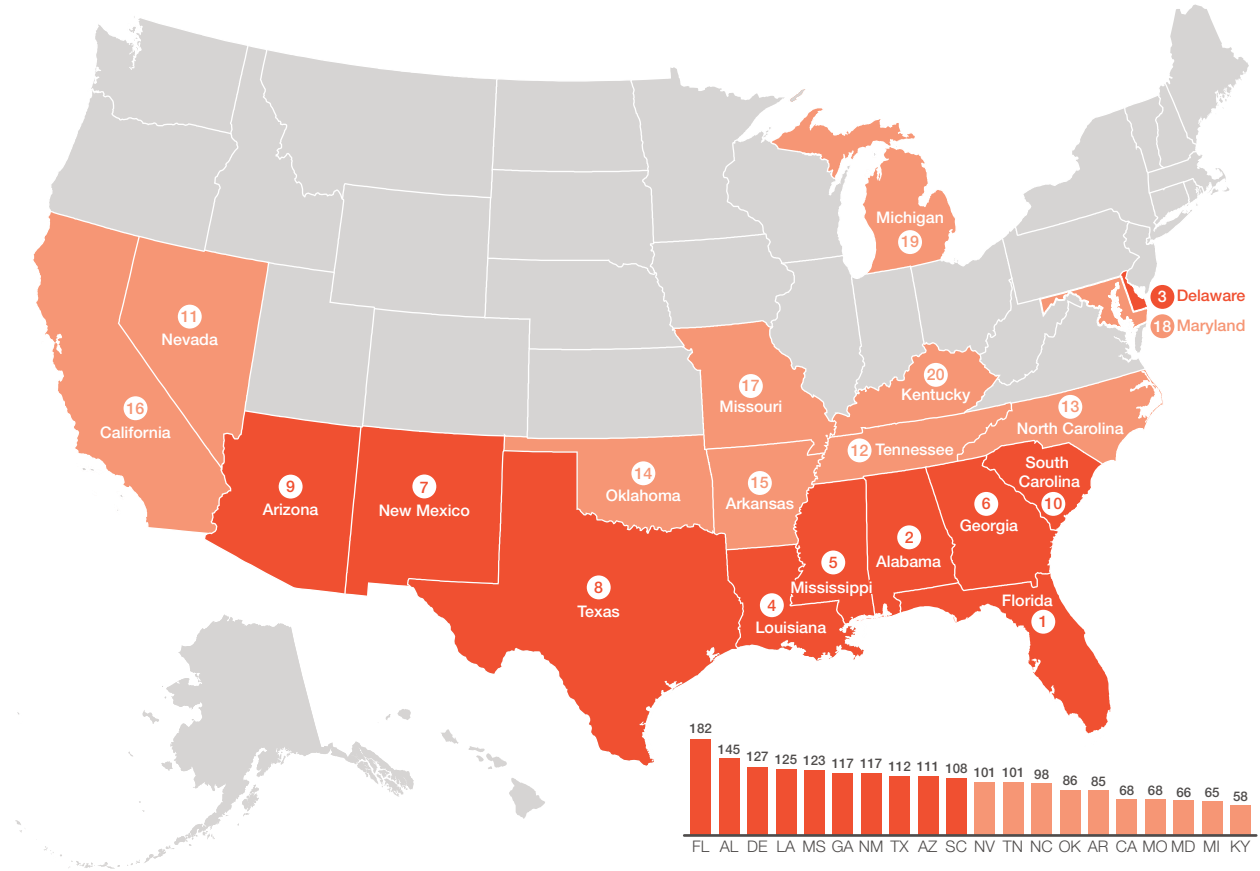

2008-2017 Pedestrian Danger Index

PDI BY STATE

The map above highlights the top 20 most dangerous states for people walking based on PDI scores. With just a few exceptions, the most dangerous states are located in the southern continental United States.

Why the Sun Belt?

Part of the reason for this may be because much of the growth in these places occurred in the age, and the development scale of, the automobile. Previous research by Smart Growth America found that in general, the most sprawling metropolitan areas with wider roads and longer blocks typically cluster in the southern states.[9] Furthermore, academic research has consistently linked these sprawling growth patterns to higher rates of both traffic-related deaths for people walking and traffic-related deaths overall.[10] Future research should explore how historic and ongoing street design practices contribute to these geographic trends.

Future research should explore how historic and ongoing street design practices contribute to these geographic trends.

The figure below shows the 10 states that experienced the biggest increase in PDI since the previous iteration of *Dangerous by Design*. Compared to PDI scores for traffic deaths for the period from 2004 to 2015, PDI scores for these states for the decade from 2008 to 2017 rose by anywhere from 7.9 to 24.5 points, meaning these places have become even more dangerous for people walking.

States with Largest Increases in 10-Year PDI Scores
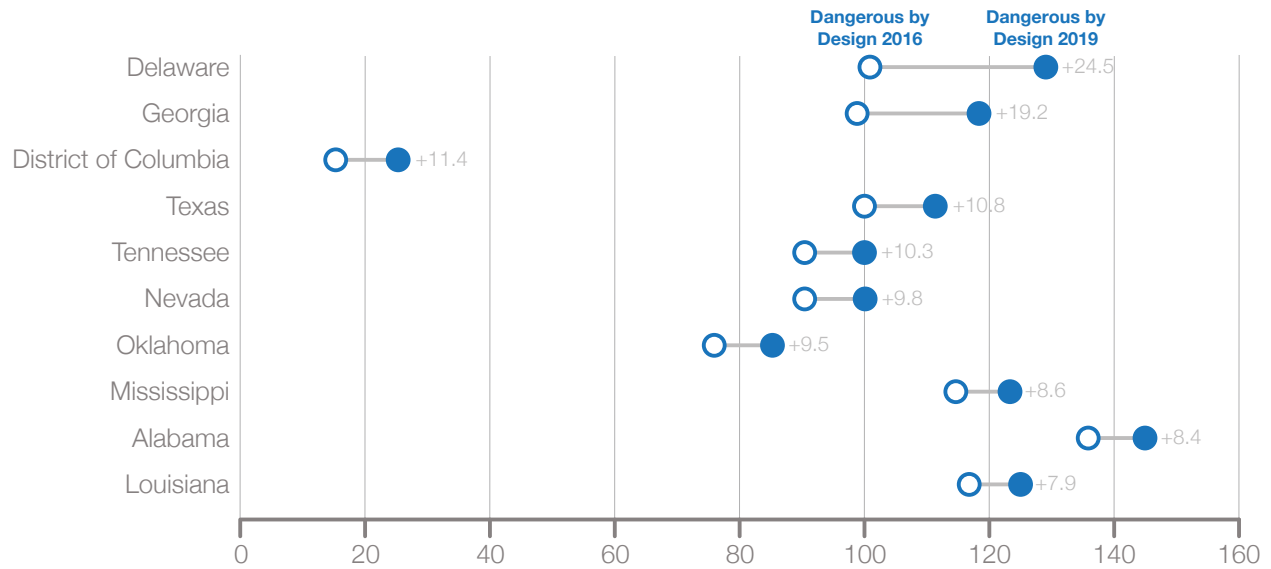
The top 10 most dangerous states for people walking in 2019 are the exact same states called out in *Dangerous by Design 2016*, although the rankings within the top 10 have shifted slightly. The figure at right shows how the top ten states have changed, or more importantly, remained exactly the same in ranking between our 2016 and 2019 reports. States highlighted in bold at the right either moved up in the ranks or remained at the top of our list of the most dangerous places for people walking. Unfortunately, overhauling road design can take decades without the political will to prioritize safety improvements. Although some of these states, including Florida (through their state DOT), have committed to statewide Complete Streets policies, they still have a long way to go to translate those policies into practice.

Top Ten Most Dangerous States

13
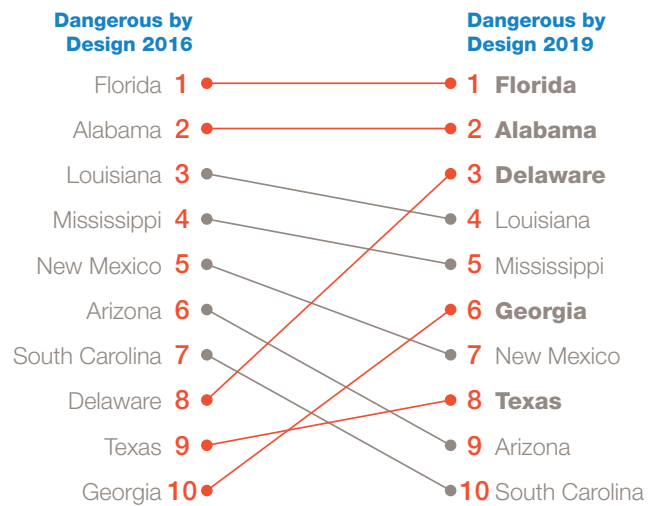
4 out of 5 major metropolitan areas grew *more dangerous* for people walking

PDI BY METROPOLITAN AREA

The next page shows the PDI scores for the top 20 most dangerous metropolitan areas for people walking. Once again, the majority of these places fall across the southern continental United States, with eight of the top 10 most dangerous metropolitan areas in the state of Florida.

Four out of every five major metropolitan areas grew more dangerous for people walking since the previous edition of *Dangerous by Design.* The chart below shows the metropolitan areas that experienced the largest increases. These regions saw PDI scores climb by upwards of 28.6 to 86.4 points, meaning the decade from 2008 to 2017 was on average much more dangerous for people walking in these places compared to the decade between 2004 and 2015.

MSAs with Largest Increases in 10-Year PDI Scores

	Dangerous by Design 2016	Dangerous by Design 2019	
North Port - Sarasota - Bradenton, FL			+86.4
Bakersfield, CA			+84.9
Orlando - Kissimmee - Sanford, FL			+78.6
Greenville - Anderson - Mauldin, SC			+51.5
Baton Rouge, LA			+37.3
Deltona - Daytona Beach - Ormond Beach, FL			+37.2
Fresno, CA			+32.3
Memphis, TN-MS-AR			+30.9
Lakeland - Winter Haven, FL			+30.3
Greensboro - High Point, NC			+28.6

0   50   100   150   200   250   300   350

THE TOP 20
Most Dangerous Metropolitan Areas for Pedestrians
(2008-2017)

● Top 1-10   ● Top 11-20

18 Detroit-Warren-Dearborn

7 Bakersfield

15 Greenville-Anderson-Mauldin

Albuquerque 17

Little Rock-North Little Rock-Conway 19

11 Memphis

20 Augusta-Richmond County

13 Birmingham-Hoover

10 Jackson

6 Jacksonville

Baton Rouge 12

2 Deltona-Daytona Beach-Ormond Beach

Orlando-Kissimmee-Sanford 1   3 Palm Bay-Melbourne-Titusville

Tampa-St. Petersburg-Clearwater 9   5 Lakeland-Winter Haven

North Port-Sarasota-Bradenton 4

Cape Coral-Fort Myers 8   14 Miami-Fort Lauderdale-West Palm Beach

16 McAllen-Edinburg-Mission

2008-2017 Pedestrian Danger Index

Metro Area	Index
Orlando-Kissimmee-Sanford	313
Deltona-Daytona Beach-Ormond Beach	265
Palm Bay-Melbourne-Titusville	245
North Port-Sarasota-Bradenton	235
Lakeland-Winter Haven	231
Jacksonville	226
Bakersfield	218
Cape Coral-Fort Myers	217
Tampa-St.Petersburg-Clearwater	205
Jackson	192
Memphis	184
Baton Rouge	158
Birmingham-Hoover	157
Miami-Fort Lauderdale-West Palm Beach	154
Greenville-Anderson-Mauldin	153
McAllen-Edinburg-Mission	141
Albuquerque	138
Detroit-Warren-Dearborn	135
Little Rock-North Little Rock-Conway	135
Augusta-Richmond County	134

RIGHT PLACE, WRONG TIME

On July 15, 2015, 46-year-old Francisca Chaja Pelico and her nine-year-old granddaughter Mariela stood on the corner of Broadway and Cecil Avenue in Knoxville, Tennessee. They waited for the light to change then proceeded into the crosswalk.

But the light changed back before they had enough time to make it all the way across the street. A driver waiting at the red light accelerated, striking both Francisca and her granddaughter in the crosswalk. Mariela's injuries, thankfully, were not serious. But Francisca was transported to the hospital where she died the next day.

Tragedies like Francisca's are far too commonplace. Compared to younger people who are struck and killed by drivers while walking, older adults killed while walking are more often at an intersection or within a crosswalk. Part of the reason for this is because even when transportation planners provide people with marked places to cross the street, the amount of time provided to rush all the way across often isn't adequate, especially for older adults and people living with disabilities.

Three years later, the City of Knoxville is testing out improvements to make the intersection of Broadway and Cecil a safer place for people walking. The T-shaped intersection now includes technology that detects people in the crosswalk and extends the length of the walk phase until they make it all the way across the street.

Scarcely 10 miles away two older adults were struck and injured in the same crosswalk by two different drivers making left-hand turns at the intersection of Downtown West and Ray Mears Boulevards.

In response, the city added a leading pedestrian interval, which gives people crossing the street a head start before cars are given the green light, making people walking more visible to turning drivers.

Leading pedestrian intervals, a proven safety countermeasure recommended by the Federal Highway Administration, cost nothing to implement where there are already pedestrian signals in place, and neither does extending the time people have to cross the street. These no-cost measures can (and do) mean the difference between life and death, especially for older adults and people living with mobility challenges.

We need to think proactively about these safety concerns when we design our intersections and make sure we provide people not only with safe, convenient places to cross the street, but also with sufficient time to make it all the way across at their own pace.

16
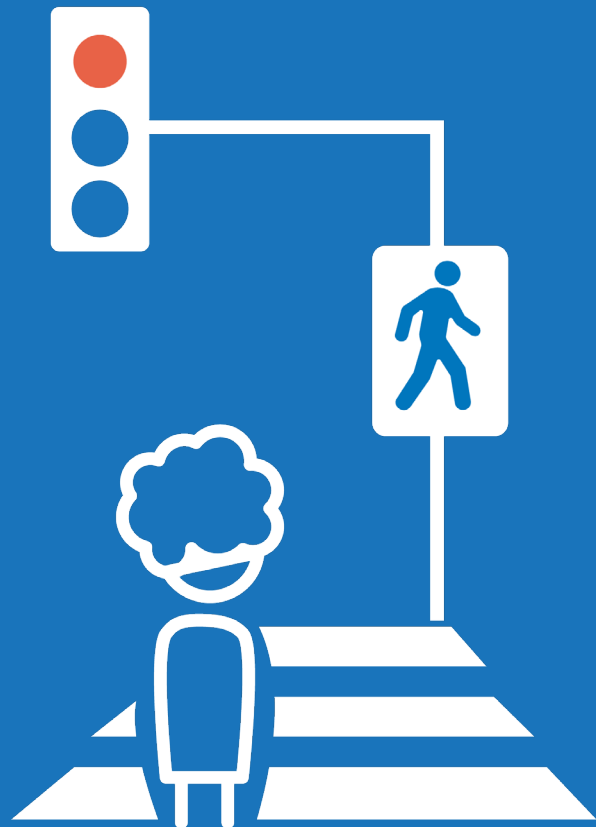
THE MOST VULNERABLE POPULATIONS

Who are the victims of these tragic crashes? Although people of all ages, races, ethnicities, and income levels suffer the consequences of dangerous street design, some neighborhoods and groups of people bear a larger share of the burden than others.

Older adults, people of color, and people walking in low-income communities are disproportionately represented in fatal crashes involving people walking.

Even after controlling for differences in population size and walking rates, we see that drivers strike and kill people over age 50, Black or African American people, American Indian or Alaska Native people, and people walking in communities with lower median household incomes at much higher rates.

Older Adults

Our nation's population is becoming older on average. People are living longer and the post-war generation known as the Baby Boomers is reaching the age of retirement. According to U.S. Census Bureau projections, people age 65 and older currently make up about 15 percent of the population, but by 2050 this is expected to rise to 22 percent.[11] This has important implications for traffic-related deaths as well as for how we design our streets.

Relative Pedestrian Danger by Age (2008-2017)

20	20.7	28
50+	65+	75+

U.S. Overall: 14.8
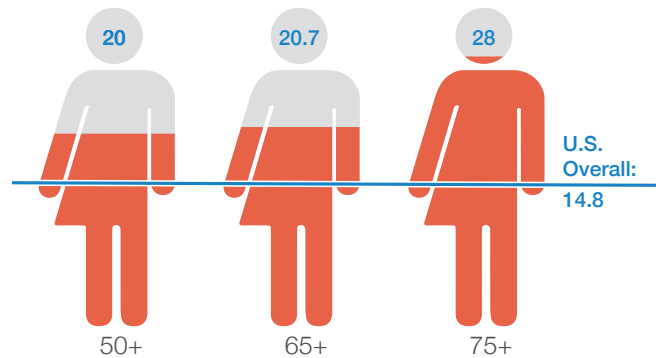
People age 50 and up, and especially people age 75 and older, are overrepresented in deaths involving people walking.[12] This age group is more likely to experience challenges seeing, hearing, or moving, and if these trends are any indication, we are not devoting nearly enough attention to the unique needs of older adults when we design our streets.

These disparities become even more pronounced when we account for variations in walking rates by age.[13,14] The relative PDI for older adults age 50 and above is more than a third higher than it is for the general population, and for people age 75 and up it is almost twice as high. Additionally, a closer look at nationwide FARS data reveals that, compared to younger victims of pedestrian deaths, older adults who are struck and killed while walking are more often at an intersection or in a crosswalk.[15]

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Source: Nelson\Nygaard

SEIZE THE MOMENT

Across the country, nonprofits and advocacy groups have staged protests and performances to call attention to the amount of time older adults need to safely cross the street. Even where marked crosswalks exist—and in many places they are still, crucially, absent—the traffic signal timing may provide a dangerously inadequate amount for older adults and people living with disabilities to safely cross.

In **Milwaukee, Wisconsin**, the Sojourn Theatre staged a performance to highlight insufficient signal timings at crosswalks. They carried homemade ship sails and mock drawbridges, staging 20-second performances in dangerous intersections identified by older adults through a survey. They also invited a state senator and six local and regional elected officials to walk across the street alongside older adults to experience firsthand how stressful and dangerous it can be to try to race against the clock. As a result, Milwaukee adjusted countdown clocks to give pedestrians more time to make it safely across the street.

In **Pittsburgh, Pennsylvania,** a group called Lively Pittsburgh organized a crosswalk flash mob. Participants of all ages and abilities wore matching "safer together" t-shirts and danced in the crosswalk as a reminder to drivers to look out for people crossing the street, especially people who may take longer to cross and use motorized chairs or crutches to get around.

And in **San Francisco, California,** the nonprofit organization Senior and Disability Action led a campaign to increase citywide signal timings so people of all ages and abilities, including people living with sight and mobility challenges, have enough time to safely cross any street. They organized marches and press conferences in public plazas to call attention to their concerns. As a result, the city changed its guidance for calculating how much time to give people to cross the street, increasing crossing times by a third citywide.

18

PEOPLE OF COLOR

Drivers strike and kill people of color, especially Black or African American and American Indian or Alaska Native people, at higher rates compared to White, Non-Hispanic, and Asian or Pacific Islander people.The figure below highlights the relative danger by census-designated racial and ethnic groups of being struck and killed while walking, controlling for differences in walking rates and population size.[16,17]

Structural racism has guided many of the decisions we've made about housing and transportation for decades, and the consequences of these decisions are still readily apparent in communities of color today. Federal policies and practices actively

discouraged homeownership for people of color, particularly for Black or African American people, by restricting mortgages outside of exclusively White neighborhoods, and the construction of the National Highway System disproportionately carved through communities of color when building these new high-speed arterials.[18] In addition to siting more dangerous roads near communities of color, implicit bias may also play a role in the increased danger for people of color. Research by the University of Nevada has shown that drivers are significantly more likely to yield to a White pedestrian in a crosswalk than to a Black or African American pedestrian.[19]

19

Relative Pedestrian Danger by Race and Ethnicity
(2008-2017)

| 8.1 | 12.4 | 13.9 | 18.3 | 33 |
| Asian or Pacific Islander | White, Non-Hispanic | Hispanic or Latino | Black or African American | American Indian or Alaska Native |

U.S. Overall: 14.8
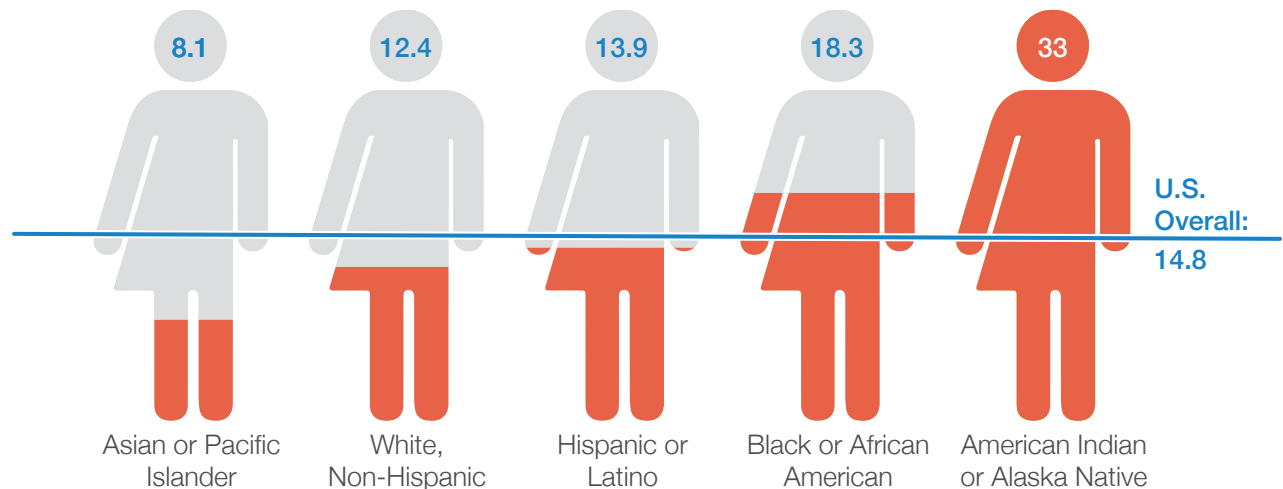
KALISPEL TRIBE OF INDIANS ADOPTS COMPLETE STREETS

When it comes to traffic safety, the challenges faced by American Indians are similar to the challenges faced throughout rural America. Sprawling, car-oriented street design, often without sidewalks or marked crosswalks, can make it incredibly dangerous to walk along many rural roads, and when crashes do occur, it can take much longer for emergency medical services to reach the victims and begin critical, life-saving treatment.

Among American Indians specifically, these challenges are further compounded by historic—and ongoing—injustices. The reservation system was, simply put, not designed with the interests or wellbeing of American Indians in mind. Lack of funding to improve and maintain roads coupled with historically poor street design has left these communities incredibly vulnerable to traffic fatalities.

For the Kalispel Tribe of Indians in Washington State, the most dangerous street is a 50 mile-per-hour county-owned roadway without any sidewalks or crosswalks. Many people must regularly walk along this road to reach jobs, shops, and schools, especially children and people who do not have access to personal vehicles.

However, change is on the horizon for the Kalispel Tribe. In 2018, they became the first tribal government to adopt a Complete Streets policy. Now, they are working closely with the county to introduce safer street improvements and to develop a new framework for economic development. Kalispel hopes to establish itself as a model for how tribal governments around the country can adopt policies and develop partnerships that better serve their unique needs, challenges, and desires.

Where are people most often struck and killed while walking?
Find the most deadly places with an interactive map:
www.smartgrowthamerica.org/dangerous-by-design

Source: Tri-State Transportation Campaign
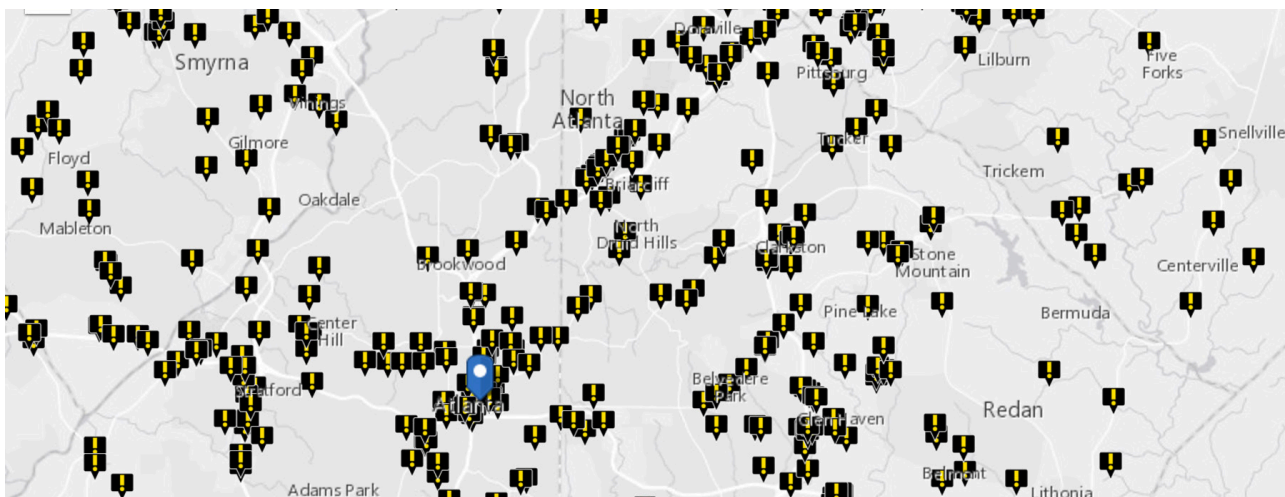
LOW-INCOME COMMUNITIES

Although nationwide data do not include information about the household income of individuals who are struck and killed while walking, they do reveal where people are walking when they are killed. We analyzed where pedestrian fatalities occur relative to the median household income of the surrounding area and found that people die while walking at much higher rates in lower-income communities compared to higher-income ones, as seen below.[20] This is unsurprising, given that low-income communities are significantly less likely than higher income communities to have sidewalks, marked crosswalks, and street design to support safer, slower speeds, also known as traffic calming.[21]

21

Location of Pedestrian Fatalities by Neighborhood Income

U.S. Overall: 1.55

Census Tract Median Household Income
Pedestrian Fatalities per 100,000
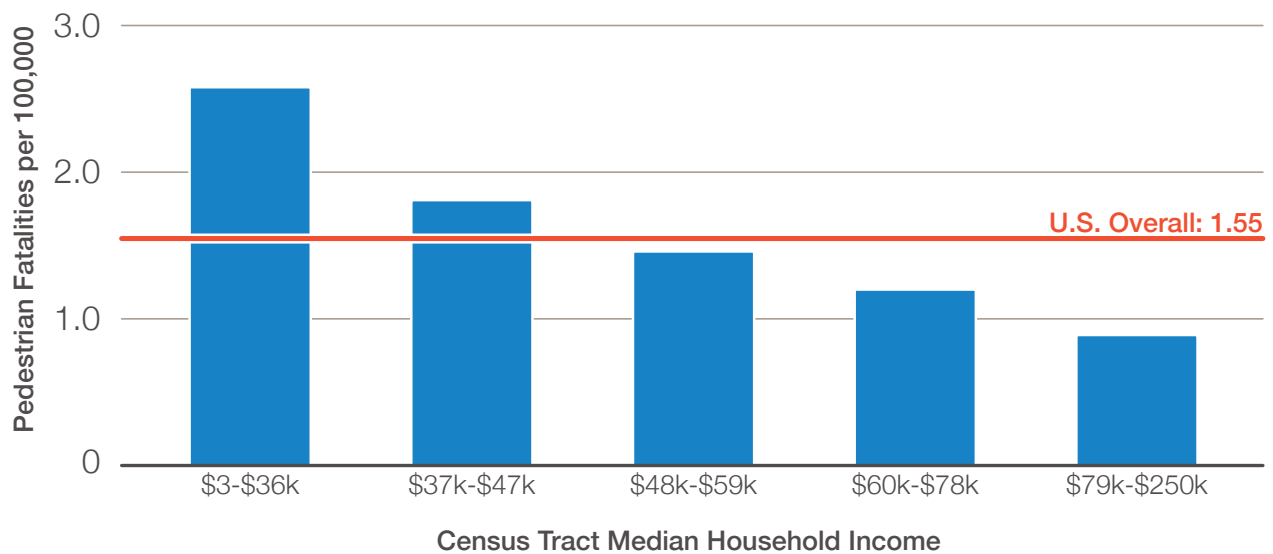
CONCLUSION

We can and must do more to reduce the number of people who die while walking every day on our roadways. For too long we have disregarded this problem by prioritizing moving cars at high speeds over safety for everyone. It's past time for that to change.

Protecting the safety of all people who use the street, especially the people most vulnerable to being struck and killed, needs to be a higher priority for policymakers, and this priority must be reflected in the decisions we make about how to fund, design, operate, maintain, and measure the success of our roads.

We call on federal policymakers to step up and establish safety as a higher priority. We call for binding, enforceable requirements for states to work toward reducing—and eventually eliminating—deaths and serious injuries on our roadways. We call for funding dedicated to safer street projects that specifically serve the needs of all people walking, particularly older adults, people of color, and low-income communities. We call for federally endorsed street design standards that put the safety of vulnerable users first and foremost and that allow for flexible, context-sensitive design approaches. The time for complacency has passed. We must treat this crisis as if our lives, and the lives of our friends, families, and neighbors, depend on it.

Because the reality is, they do.

WORDS MATTER

They're crashes, not "accidents."

Writing and talking about these preventable deaths as mere "accidents" undermines the urgency of this crisis and undercuts our responsibility to take action.

To combat this rhetoric, one Nashville-based initiative is changing the conversation. A partnership between Vanderbilt Medical Center, Tennessee State University, The Sidewalk Foundation, and Walk Bike Nashville launched the Nashville Pedestrian Death Registry. The project maps where people die while walking in Nashville and tells a richer, more complete story about who the victims were and where and why the fatal crash occurred.

The project aims to add urgency to the call for safer streets in Nashville, where the sidewalk network is notoriously incomplete or non-existent. Instead of reiterating the victim-blaming rhetoric prevalent in media coverage about these tragic deaths (such as focusing on dark colored clothing, distracted walking, walking while intoxicated, and crossing where no crosswalk is available), the Nashville Pedestrian Death Registry is shifting the narrative toward the human faces behind these tragedies. By changing the conversation about why people die while walking, the Nashville Pedestrian Death Registry hopes to garner support for policies that prioritize the safety of people walking and for more investment in projects to improve safety.

You can learn more about this initiative at NashvillePedestrianDeathRegistry.org

ENDNOTES

1. All pedestrian fatality data for the report are from: National Highway Traffic Safety Administration. (2017). Fatality Analysis Reporting System. Available from https://www.nhtsa.gov/research-data/fatality-analysis-reporting-system-fars.

2. Ibid.

3. Federal Highway Administration. (2009; 2017). National Household Travel Survey. Available from https://nhts.ornl.gov/.

4. Federal Highway Administration. (2008-2016). Highway Statistics Series, Table VM-2. Available from http://www.fhwa.dot.gov/policyinformation/quickfinddata/qftravel.cfm

5. Federal Highway Administration. (2017). Travel Monitoring, Traffic Volume Trends. Available from https://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm.

6. National Highway Traffic Safety Administration. (2015). New Car Assessment Program. Available from https://www.federalregister.gov/documents/2015/12/16/2015-31323/new-car-assessment-program.

7. Lawrence ED, Bomey N, and Tanner K. (2018). "Death on foot: America's love of SUVs is killing pedestrians." Detroit Free Press. Available from https://www.freep.com/story/money/cars/2018/06/28/suvs-killing-americas-pedestrians/646139002/.

8. Other non-motorists category includes bicyclists and other cyclists, persons on personal conveyances, and persons in/on buildings.

9. Ewing R, Pendall R, and Chen D. (2002). Measuring Sprawl and Its Impact. Available from: https://www.smartgrowthamerica.org/app/legacy/documents/MeasuringSprawl.PDF.

10. Ewing R, Schieber RA, and Zegeer CV. (2003). Urban Sprawl as a Risk Factor in Motor Vehicle Occupant and Pedestrian Fatalities. American Journal of Public Health 93(9): 1541-1545. Available from https://ajph.aphapublications.org/doi/full/10.2105/AJPH.93.9.1541.

11. U.S. Census Bureau. (2017). National Population Projections Tables. Available from https://www.census.gov/data/tables/2017/demo/popproj/2017-summary-tables.html.

12. Excludes 164 reported pedestrian fatalities (0.3 percent of all pedestrian fatalities) with missing age data.

13. Share of all trips made by walking by age taken from the 2017 National Household Travel Survey. These range from 9.5 percent of all trips for people age 75 and older to 11.2 percent of all trips for people age zero to nineteen.

14. Gender-neutral icon courtesy of OliM via the Noun Project. Available from https://thenounproject.com.

15. Built environment data, including the presence of a crosswalk, were made available in the FARS dataset as of 2015. Between 2015 and 2017, pedestrian fatalities at intersections and crosswalks were more likely to be a person over 65 than a person under 65.

16. Excludes 5,420 reported pedestrian fatalities (11.0 percent of all pedestrian fatalities) with missing race and/or ethnicity data.

17. Share of all trips made by walking by race and ethnicity taken from the 2017 National Household Travel Survey. These range from 9.9 percent of all trips for the White, Non-Hispanic population to 14.5 percent of all trips for the Asian, Native Hawaiian, or Pacific Islander population.

18. Rothstein R. (2017). The Color of Law: A forgotten history of how our government segregated America. New York: Liveright Publishing Corporation.

19. Coughenour C, Clark S, Singh A, et al. (2017). Examining racial bias as a potential factor in pedestrian crashes. Accident Analysis & Prevention 98: 96-100. Available from https://www.sciencedirect.com/science/article/abs/pii/S000145751630361X.

20. Consult the Methodology for a more detailed description of this analysis.

21. Gibbs K, Slater SJ, Nicholson N, et al. (2012.) "Income Disparities in Street Features that Encourage Walking." Bridging the Gap Program, University of Illinois at Chicago. Available from http://www.bridgingthegapresearch.org/_asset/02fpi3/btg_street_walkability_FINAL_03-09-12.pdf.

APPENDICES

Methodology

Dangerous by Design uses several metrics to assess relative danger to pedestrians across different geographies and demographic characteristics. All pedestrian fatalities are reported within the 10-year timeframe of 2008 to 2017 to account for any large variations in fatalities in a single year. The 2016 edition of the report accounted for data between 2005 and 2014.

One measure of pedestrian fatality rates that this report cites across different demographic characteristics is pedestrian fatalities per 100,000 people. This metric accounts for the number of pedestrian deaths that are occurring within a certain population, while normalizing by the population itself. For example, all pedestrian deaths of people over the age of 65, normalized by the total population of people over 65. All population, race, age, and ethnicity data are from the 2012-2016 American Community Survey 5-year estimates, to ensure the most up-to-date information at the time of this report.

$$\frac{\text{Pedestrian Deaths of Population A}}{\text{Population A}} \times 100{,}000 = \begin{array}{c}\text{Pedestrian Deaths} \\ \text{per 100,000 people} \\ \text{in Population A}\end{array}$$

24

The Pedestrian Danger Index (PDI) takes pedestrian deaths per 100,000 people and normalizes it by walking rates. The count of pedestrian deaths or pedestrian deaths per 100,000 people may be much higher in an urban area than a rural area; however, that doesn't account for how many people are walking. For geographic area PDI scores, such as the state and metropolitan statistical area (MSA)-level, walking rates are measured with Census "Means of Transportation to Work" data. While walk-to-work percentage is merely a proxy for the share of walking trips in an area, it is used because the metric is available uniformly across all states and the top 100 metropolitan statistical areas.

For demographic analysis of pedestrian fatalities across age, race, and ethnicity, we use a variation of PDI scores that includes the percentage of total trips that were walking trips is taken from the 2017 National Household Travel Survey (NHTS). These data were used because they report walking trips by age, race, and ethnicity as well as include walking percentage for all trips—not just journey to work trips. This information allows relative danger by age, race, and ethnicity to reflect whether these populations tend to walk more or less than the population as a whole. Due to the small sample size of the NHTS, the total percentage of walking trips is only appropriate to use for comparisons across race, age, and ethnicity at the national level.

$$\frac{\frac{\text{Pedestrian Deaths}}{\text{Population}} \times 100{,}000}{\text{Percentage of Walking Trips}} = \begin{array}{c}\text{Pedestrian} \\ \text{Danger} \\ \text{Index}\end{array}$$

NHTSA FARS data do not include information about the household income of individuals who are struck and killed while walking; however, they do reveal where people are walking when they are killed. To analyze where pedestrian fatalities occur relative to median household income of the surrounding area, fatalities were joined to census tracts using GIS. The median household income of census tracts was grouped into quintiles to determine high- and low- income communities. Pedestrian deaths were then aggregated into these 5 tract types, and normalized by the population of the tracts. This analysis serves as a method to determine whether pedestrians die disproportionately in low-income areas.

To calculate the number of fatalities by MSA, a spatial join was performed with the longitude and latitude as reported by FARS. Approximately 126 fatalities did not include location data, and therefore there is a chance that the estimate of deaths per MSA is conservative.

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State Pedestrian Danger Index, 2008-2017

2019 Rank	State	Pedestrian Fatalities (2008-2017)	Average Annual Pedestrian Fatalities per 100,000 (2008-2017)	2019 Pedestrian Danger Index
1	Florida	5,433	2.73	182.0
2	Alabama	841	1.74	145.0
3	Delaware	250	2.67	127.1
4	Louisiana	1,047	2.25	125.0
5	Mississippi	551	1.84	122.7
6	Georgia	1,782	1.76	117.33
7	New Mexico	537	2.58	117.27
8	Texas	4,831	1.79	111.9
9	Arizona	1,503	2.23	111.5
10	South Carolina	1,144	2.37	107.8
11	Nevada	601	2.12	100.95
12	Tennessee	856	1.31	100.77
13	North Carolina	1,762	1.77	98.3
14	Oklahoma	596	1.54	85.6
15	Arkansas	427	1.44	84.7
16	California	7,127	1.84	68.2
17	Missouri	779	1.29	67.9
18	Maryland	1,059	1.78	65.9
19	Michigan	1,409	1.42	64.6
20	Kentucky	610	1.38	57.5
	National Average	**49,340**	**1.55**	**55.3**
21	New Jersey	1,543	1.73	54.1
22	Indiana	725	1.10	52.4
23	Virginia	865	1.04	43.3
24	Utah	321	1.09	42.0
25	Connecticut	425	1.18	40.7
26	Ohio	1,058	0.91	39.6
27	West Virginia	214	1.16	38.7
28	Oregon	557	1.40	36.8
29	Colorado	590	1.10	36.7
30	Hawaii	226	1.60	36.4
31	Kansas	242	0.83	36.1
32	Illinois	1,323	1.03	33.2
33	Pennsylvania	1,502	1.17	30.0
34	Rhode Island	127	1.20	30.0
35	Washington	712	1.01	28.1
36	District of Columbia	101	1.53	26.8
37	Wisconsin	491	0.85	25.8
38	Idaho	121	0.74	25.5
39	Montana	130	1.27	24.9
40	North Dakota	62	0.84	24.7
41	New York	2,958	1.50	24.6
42	Maine	130	0.98	23.9
43	Minnesota	361	0.66	23.6
44	New Hampshire	97	0.73	23.6
45	Nebraska	116	0.62	23.0
46	Massachusetts	725	1.08	22.5
47	South Dakota	72	0.85	22.4
48	Wyoming	48	0.82	20.5
49	Iowa	210	0.68	19.4
50	Alaska	93	1.26	16.0
51	Vermont	50	0.80	13.8

Change in Statewide Pedestrian Danger Index Scores, 2016-2018

State	2016 PDI	2019 PDI	Change 2016-2019
Delaware	102.6	127.1	24.5
Georgia	98.1	117.3	19.2
District of Columbia	15.4	26.8	11.4
Texas	101.1	111.9	10.8
Tennessee	90.5	100.8	10.3
Nevada	91.2	101.0	9.8
Oklahoma	76.1	85.6	9.5
Mississippi	114.1	122.7	8.6
Alabama	136.6	145.0	8.4
Louisiana	117.1	125.0	7.9
Missouri	60.2	67.9	7.7
Oregon	30.7	36.8	6.1
Indiana	46.3	52.4	6.1
Connecticut	34.9	40.7	5.8
Nebraska	17.3	23.0	5.7
Kansas	30.5	36.1	5.6
Florida	177.0	182.0	5.0
New Mexico	112.8	117.3	4.5
Arkansas	80.6	84.7	4.1
Maine	19.9	23.9	4.0
California	64.4	68.2	3.8
Michigan	61.0	64.6	3.6
Ohio	36.3	39.6	3.3
Utah	38.9	41.9	3.0
Arizona	108.5	111.5	3.0
Colorado	33.7	36.7	3.0
Kentucky	54.9	57.5	2.6
North Dakota	22.2	24.7	2.5
Vermont	11.4	13.8	2.5
North Carolina	96.3	98.3	2.0
Virginia	41.4	43.3	1.9
Idaho	23.8	25.5	1.7
Washington	26.5	28.1	1.6
New Hampshire	22.2	23.6	1.4
Alaska	14.6	16.0	1.4
South Carolina	106.5	107.7	1.2
Minnesota	22.6	23.6	1.0
New York	24.0	24.6	0.6
Massachusetts	22.1	22.5	0.4
Wisconsin	25.6	25.8	0.2
Iowa	19.7	19.4	-0.3
Pennsylvania	30.3	30.0	-0.3
South Dakota	22.8	22.4	-0.4
Illinois	34.0	33.2	-0.8
Wyoming	22.0	20.5	-1.5
Hawaii	38.3	36.4	-1.9
New Jersey	56.1	54.1	-2.0
Montana	27.1	24.9	-2.2
Rhode Island	32.3	30.0	-2.3
West Virginia	41.6	38.7	-2.9
Maryland	77.8	65.9	-11.9

Top 100 Metropolitan Statistical Areas Pedestrian Danger Index, 2008-2017

2019 Rank	Metro Area	Pedestrian Deaths (2008-2017)	Annual Pedestrian Fatalities per 100,000	2019 Pedestrian Danger Index
1	Orlando-Kissimmee-Sanford, FL	656	2.82	313.3
2	Deltona-Daytona Beach-Ormond Beach, FL	212	3.45	265.4
3	Palm Bay-Melbourne-Titusville, FL	165	2.94	245.0
4	North Port-Sarasota-Bradenton, FL	194	2.58	234.6
5	Lakeland-Winter Haven, FL	162	2.54	230.9
6	Jacksonville, FL	419	2.94	226.2
7	Bakersfield, CA	247	2.83	217.7
8	Cape Coral-Fort Myers, FL	148	2.17	217.0
9	Tampa-St. Petersburg-Clearwater, FL	900	3.07	204.7
10	Jackson, MS	111	1.92	192.0
11	Memphis, TN-MS-AR	297	2.21	184.2
12	Baton Rouge, LA	182	2.21	157.9
13	Birmingham-Hoover, AL	179	1.57	157.0
14	Miami-Fort Lauderdale-West Palm Beach, FL	1,549	2.61	153.5
15	Greenville-Anderson-Mauldin, SC	197	2.29	152.7
16	McAllen-Edinburg-Mission, TX	140	1.69	140.8
17	Albuquerque, NM	213	2.35	138.2
18	Detroit-Warren-Dearborn, MI	757	1.76	135.4
19	Little Rock-North Little Rock-Conway, AR	118	1.62	135.0
20	Augusta-Richmond County, GA-SC	126	2.15	134.4
21	San Antonio-New Braunfels, TX	519	2.23	131.2
22	Phoenix-Mesa-Scottsdale, AZ	874	1.95	130.0
23	Houston-The Woodlands-Sugar Land, TX	1,179	1.82	130.0
24	Las Vegas-Henderson-Paradise, NV	453	2.19	128.8
25	Atlanta-Sandy Springs-Roswell, GA	1,005	1.79	127.9
26	Fresno, CA	209	2.17	127.7
27	Greensboro-High Point, NC	121	1.62	124.6
28	Dallas-Fort Worth-Arlington, TX	1,037	1.49	124.2
29	Tulsa, OK	148	1.52	116.9
30	Riverside-San Bernardino-Ontario, CA	922	2.08	115.6
31	Raleigh, NC	170	1.37	114.2
32	Oklahoma City, OK	222	1.66	110.7
33	Charlotte-Concord-Gastonia, NC-SC	359	1.51	107.9
34	Stockton-Lodi, CA	151	2.11	105.5
35	Louisville/Jefferson County, KY-IN	225	1.77	104.1
36	Knoxville, TN	105	1.23	102.5
37	Nashville-Davidson-Murfreesboro-Franklin, TN	232	1.29	99.2
38	El Paso, TX	173	2.07	98.6
39	Winston-Salem, NC	89	1.36	97.1
40	Austin-Round Rock, TX	303	1.56	91.8
41	Indianapolis-Carmel-Anderson, IN	269	1.37	91.3
42	New Orleans-Metairie, LA	257	2.06	89.6
43	St. Louis, MO-IL	393	1.40	87.5
44	Charleston-North Charleston, SC	165	2.27	87.3
45	Kansas City, MO-KS	234	1.13	86.9
46	Sacramento-Roseville-Arden-Arcade, CA	407	1.81	86.2
47	Tucson, AZ	199	1.98	86.1
48	San Jose-Sunnyvale-Santa Clara, CA	281	1.45	80.6
49	Richmond, VA	175	1.39	77.2
50	Los Angeles-Long Beach-Anaheim, CA	2,520	1.91	76.4
51	Wichita, KS	68	1.06	70.7
52	Salt Lake City, UT	155	1.34	70.5
53	Youngstown-Warren-Boardman, OH-PA	67	1.21	67.2
54	San Diego-Carlsbad, CA	610	1.87	64.5
55	Baltimore-Columbia-Towson, MD	496	1.78	63.6
56	Ogden-Clearfield, UT	66	1.04	61.2
57	Denver-Aurora-Lakewood, CO	352	1.28	58.2
	National Average	**49,340**	**1.55**	**55.3**
58	Chattanooga, TN-GA	60	1.10	55.0
59	Columbus, OH	225	1.13	53.8
60	Grand Rapids-Wyoming, MI	111	1.08	51.4

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Top 100 Metropolitan Statistical Areas Pedestrian Danger Index, 2008-2017

2019 Rank	Metro Area	Pedestrian Deaths (2008-2017)	Annual Pedestrian Fatalities per 100,000	2019 Pedestrian Danger Index
61	Oxnard-Thousand Oaks-Ventura, CA	86	1.02	51.0
62	Hartford-West Hartford-East Hartford, CT	145	1.20	50.0
63	Columbia, SC	175	2.19	49.8
64	Toledo, OH	72	1.19	49.6
65	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	1,045	1.73	46.8
66	Akron, OH	56	0.80	44.4
67	Des Moines-West Des Moines, IA	49	0.80	44.4
68	Buffalo-Cheektowaga-Niagara Falls, NY	131	1.15	44.2
69	Allentown-Bethlehem-Easton, PA-NJ	102	1.23	43.9
70	Cincinnati, OH-KY-IN	194	0.90	42.9
71	Dayton, OH	85	1.06	42.4
72	Scranton-Wilkes-Barre-Hazleton, PA	78	1.39	42.1
73	Milwaukee-Waukesha-West Allis, WI	178	1.13	41.9
74	Harrisburg-Carlisle, PA	70	1.25	41.7
75	Virginia Beach-Norfolk-Newport News, VA-NC	213	1.24	41.3
76	Washington-Arlington-Alexandria, DC-VA-MD-WV	764	1.27	39.7
77	Bridgeport-Stamford-Norwalk, CT	101	1.07	39.6
78	New Haven-Milford, CT	121	1.41	38.1
79	Spokane-Spokane Valley, WA	57	1.05	36.2
80	Boise City, ID	43	0.65	36.1
81	Omaha-Council Bluffs, NE-IA	59	0.65	36.1
82	Cleveland-Elyria, OH	162	0.79	35.9
83	Portland-Vancouver-Hillsboro, OR-WA	288	1.22	35.8
84	Albany-Schenectady-Troy, NY	106	1.21	34.6
85	Chicago-Naperville-Elgin, IL-IN-WI	1,022	1.07	34.5
86	Providence-Warwick, RI-MA	195	1.21	33.6
87	San Francisco-Oakland-Hayward, CA	659	1.44	33.5
88	Worcester, MA-CT	102	1.10	33.3
89	Minneapolis-St. Paul-Bloomington, MN-WI	237	0.68	30.9
90	Urban Honolulu, HI	154	1.56	30.6
91	Rochester, NY	110	1.02	29.1
92	Pittsburgh, PA	211	0.90	27.3
93	New York-Newark-Jersey City, NY-NJ-PA	3,210	1.60	27.1
94	Seattle-Tacoma-Bellevue, WA	360	0.98	26.5
95	Springfield, MA	76	1.21	24.7
96	Syracuse, NY	71	1.07	23.8
97	Colorado Springs, CO	55	0.80	23.5
98	Boston-Cambridge-Newton, MA-NH	465	0.98	19.6
99	Madison, WI	56	0.88	18.0
100	Provo-Orem, UT	45	0.78	17.3

Change in Metropolitan Statistical Areas Pedestrian Danger Index Scores, 2016-2018

Metro Area	2016 PDI	2019 PDI	Change 2016-2019
North Port-Sarasota-Bradenton, FL	148.2	234.6	86.4
Bakersfield, CA	132.8	217.7	84.9
Orlando-Kissimmee-Sanford, FL	234.7	313.3	78.6
Greenville-Anderson-Mauldin, SC	101.2	152.7	51.5
Baton Rouge, LA	120.6	157.9	37.3
Deltona-Daytona Beach-Ormond Beach, FL	228.2	265.4	37.2
Fresno, CA	95.4	127.7	32.3
Memphis, TN-MS-AR	153.3	184.2	30.9
Lakeland-Winter Haven, FL	200.6	230.9	30.3
Greensboro-High Point, NC	96.0	124.6	28.6
San Antonio-New Braunfels, TX	104.5	131.2	26.7
Birmingham-Hoover, AL	132.1	157.0	24.9
Albuquerque, NM	113.6	138.2	24.6
Oklahoma City, OK	86.7	110.7	24.0
McAllen-Edinburg-Mission, TX	118.8	140.8	22.0
Indianapolis-Carmel-Anderson, IN	69.9	91.3	21.4
Atlanta-Sandy Springs-Roswell, GA	107.2	127.9	20.7
Augusta-Richmond County, GA-SC	114.8	134.4	19.6
St. Louis, MO-IL	69.7	87.5	17.8
Salt Lake City, UT	53.0	70.5	17.5
Knoxville, TN	85.5	102.5	17.0
Austin-Round Rock, TX	77.8	91.8	14.0
Dallas-Fort Worth-Arlington, TX	110.4	124.2	13.8
Tampa-St. Petersburg-Clearwater, FL	192.0	204.7	12.7
El Paso, TX	86.8	98.6	11.8
Detroit-Warren-Dearborn, MI	124.2	135.4	11.2
Las Vegas-Henderson-Paradise, NV	117.7	128.8	11.1
Hartford-West Hartford-East Hartford, CT	39.6	50.0	10.4
Colorado Springs, CO	13.5	23.5	10.0
Palm Bay-Melbourne-Titusville, FL	235.2	245.0	9.8
Charleston-North Charleston, SC	77.9	87.3	9.4
Charlotte-Concord-Gastonia, NC-SC	98.5	107.9	9.4
Miami-Fort Lauderdale-West Palm Beach, FL	145.1	153.5	8.4
Kansas City, MO-KS	79.2	86.9	7.7
Columbus, OH	46.2	53.8	7.6
Raleigh, NC	106.7	114.2	7.5
Louisville/Jefferson County, KY-IN	96.7	104.1	7.4
Little Rock-North Little Rock-Conway, AR	127.9	135.0	7.1
Dayton, OH	35.4	42.4	7.0
Albany-Schenectady-Troy, NY	27.8	34.6	6.8
Omaha-Council Bluffs, NE-IA	29.5	36.1	6.6
Los Angeles-Long Beach-Anaheim, CA	69.8	76.4	6.6
Tulsa, OK	110.5	116.9	6.4
Nashville-Davidson-Murfreesboro-Franklin, TN	92.9	99.2	6.3
Spokane-Spokane Valley, WA	30.0	36.2	6.2
Harrisburg-Carlisle, PA	35.5	41.7	6.2
Cleveland-Elyria, OH	30.3	35.9	5.6
Bridgeport-Stamford-Norwalk, CT	34.1	39.6	5.5
San Jose-Sunnyvale-Santa Clara, CA	75.1	80.6	5.5
Cincinnati, OH-KY-IN	37.5	42.9	5.4
New Haven-Milford, CT	33.1	38.1	5.0
Phoenix-Mesa-Scottsdale, AZ	125.1	130.0	4.9
Sacramento-Roseville-Arden-Arcade, CA	81.3	86.2	4.9
Boise City, ID	31.3	36.1	4.8
Portland-Vancouver-Hillsboro, OR-WA	31.3	35.9	4.6
Virginia Beach-Norfolk-Newport News, VA-NC	37.1	41.3	4.2
Buffalo-Cheektowaga-Niagara Falls, NY	40.7	44.2	3.5
Tucson, AZ	82.6	86.1	3.5
Milwaukee-Waukesha-West Allis, WI	38.6	41.9	3.3
Houston-The Woodlands-Sugar Land, TX	127.2	130.0	2.8
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	44.0	46.8	2.8
Minneapolis-St. Paul-Bloomington, MN-WI	28.2	30.9	2.7
Stockton-Lodi, CA	102.9	105.5	2.6
Jackson, MS	189.6	192.0	2.4
Wichita, KS	68.5	70.7	2.2

Change in Metropolitan Statistical Areas Pedestrian Danger Index Scores, 2016-2018

Metro Area	2016 PDI	2019 PDI	Change 2016-2019
San Francisco-Oakland-Hayward, CA	31.4	33.5	2.1
Seattle-Tacoma-Bellevue, WA	24.7	26.5	1.8
San Diego-Carlsbad, CA	62.7	64.5	1.8
Worcester, MA-CT	31.7	33.3	1.6
Boston-Cambridge-Newton, MA-NH	18.0	19.6	1.6
Toledo, OH	48.0	49.6	1.6
Madison, WI	16.4	18.0	1.6
New Orleans-Metairie, LA	88.7	89.6	0.9
Syracuse, NY	23.0	23.8	0.8
Pittsburgh, PA	26.6	27.3	0.7
Grand Rapids-Wyoming, MI	51.1	51.4	0.3
Chicago-Naperville-Elgin, IL-IN-WI	34.2	34.5	0.3
Rochester, NY	29.0	29.1	0.1
New York-Newark-Jersey City, NY-NJ-PA	27.0	27.1	0.1
Youngstown-Warren-Boardman, OH-PA	67.3	67.2	-0.1
Denver-Aurora-Lakewood, CO	58.7	58.2	-0.5
Scranton-Wilkes-Barre-Hazleton, PA	42.7	42.1	-0.6
Akron, OH	46.0	44.4	-1.6
Chattanooga, TN-GA	56.8	55.0	-1.8
Baltimore-Columbia-Towson, MD	65.7	63.6	-2.1
Provo-Orem, UT	19.5	17.3	-2.2
Jacksonville, FL	228.7	226.2	-2.6
Winston-Salem, NC	99.7	97.1	-2.6
Urban Honolulu, HI	33.9	30.6	-3.3
Oxnard-Thousand Oaks-Ventura, CA	54.4	51.0	-3.4
Allentown-Bethlehem-Easton, PA-NJ	47.5	43.9	-3.6
Springfield, MA	28.3	24.7	-3.6
Richmond, VA	81.0	77.2	-3.8
Washington-Arlington-Alexandria, DC-VA-MD-WV	43.5	39.7	-3.8
Providence-Warwick, RI-MA	38.0	33.6	-4.4
Des Moines-West Des Moines, IA	49.7	44.4	-5.3
Riverside-San Bernardino-Ontario, CA	123.4	115.6	-7.8
Columbia, SC	62.6	49.7	-12.8
Ogden-Clearfield, UT	74.4	61.2	-13.2
Cape Coral-Fort Myers, FL	283.1	217.0	-66.1

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