

Land use plays a role in pedestrian freeway fatalities

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A sign warns against walking on a freeway in Austin.

After a fifth pedestrian was killed this year crossing Interstate 35 in Austin, Texas, a local headline expressed the city's frustration. "Why does it keep happening?" the local ABC affiliate asked. Since then the death toll has reached 13.

Austin is not alone in wondering why this happens and what can be done. In recent years, more than 800 pedestrians annually have been killed on U.S. interstates and other freeways. The largest number of them were hit attempting to cross in urban areas, a new study from the Insurance Institute for Highway Safety finds.

The researchers zoomed in on California for a more detailed analysis and found that most of the fatal crossing crashes there occur where the freeway separates residential areas from commercial and other nonresidential areas.

Many U.S. cities have interstates or other major highways cutting through them and separating neighborhoods. Planning decisions made decades ago are difficult to undo, but communities can take practical steps to keep pedestrians safe.

Click [here](#) to watch on YouTube.



"Our findings suggest that localities with residential communities across the freeway from shopping centers, bus stations or entertainment districts should consider physical barriers that prevent pedestrians from crossing — especially if the commercial centers include bars or liquor stores," says Jessica Cicchino,

[IIHS](#) vice president (picture) for research.

Indeed, a fence along the median to discourage crossers is one of the changes Austin police would like to see on I-35. Most of those killed crossing I-35 are homeless people who often live in tents or makeshift dwellings on the roadside, says Austin Police Department Detective Patrick Oborski. Over the years, he has also seen many fatalities at Capital Plaza near 51st street, where there are low income hotels and motels on one side of the freeway and a McDonald's and other fast food restaurants on the other.

“That’s one of the areas that’s consistently been a hot spot for us,” Oborski says.

Across the country, pedestrian fatalities increased 53 percent from 2009 to 2018 and now account for 17 percent of traffic deaths (see [“Study highlights rising pedestrian deaths, points toward solutions,”](#) May 8, 2018).

Pedestrian fatalities on interstates and other high speed, controlled access roads increased by 60 percent over the same period. From 2015 to 2018 more than 800 pedestrians were killed on such roadways annually.

To get a clearer picture of when, where and why those deaths are happening, researchers analyzed data from the federal database of fatal motor vehicle crashes over 2015-17. They looked at various crash characteristics, such as whether or not the person killed was an “unintended” pedestrian stranded due to a disabled vehicle.

For California, where the largest number of pedestrians were killed crossing interstates and freeways during the study period, the researchers also identified the types of land use on both sides of the roadway at the places people were killed while crossing.

Nationwide, most of the 2,518 pedestrian fatalities on freeways and interstates from 2015 to 2017 occurred in urban areas, at night and in the dark. More than half of fatal crashes took place in locations where the speed limit was 65 miles per hour or higher, notes IIHS researcher Jin Wang, the lead author of the study.

“Darkness and speed often come into play in pedestrian crashes, but these factors are exaggerated on interstates and freeways,” says Wang. “That suggests better lit roadways and better headlights could make a difference.”



IIHS ratings have demonstrated wide differences in how well various headlights illuminate the road (see [“Headlights improve, but base models leave drivers in the dark,”](#) Nov. 29, 2018).

Past research has shown that drivers do not use their high beam headlights as often as they should (see [“Few drivers use their high beams, study finds,”](#) March 30, 2016).

Speed is perhaps the most important risk factor. On average, 9 out of 10 pedestrians who are hit by a vehicle traveling at 55 mph die as a result of their injuries, and that number increases at higher speeds.

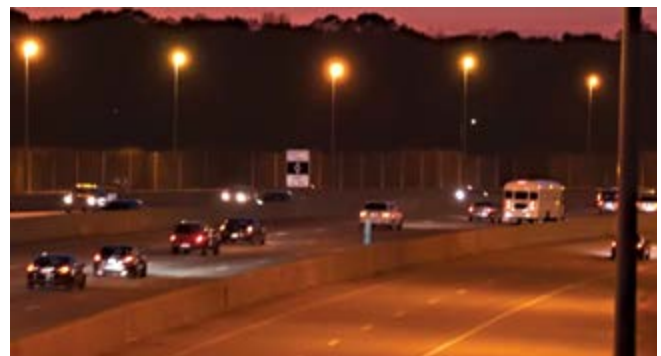
Only 18 percent of the pedestrians killed were on the freeway because of a disabled vehicle. About a third of those killed had a blood alcohol concentration of 0.08 percent or higher, and 42 percent were attempting to cross the freeway.

In the analysis of California, the researchers found that nearly 3 out of 5 people killed while crossing freeways were crossing at points with residential land on one side of the roadway and commercial, transportation, recreational, institutional or industrial property on the other. Only 13 percent of fatal crossing crashes occurred in spots with residential land on both sides of the interstate or freeway.

The findings suggest that a combination of better lighting, physical barriers preventing pedestrians from crossing at road level, and correctly designed overpasses and underpasses to allow people to cross safely could greatly reduce the number of fatalities.

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IIHS Insurance Institute for Highway Safety
HLDI Highway Loss Data Institute