



U.S. Department
of Transportation

National Highway
Traffic Safety
Administration

IN OXNARD, SPEED HUMPS THAT SLOW EMERGENCY
RESPONSE VEHICLES BY JUST 30 SECONDS WILL
KILL AN EXTRA 715 SUDDEN CARDIAC ARREST
VICTIMS TO SAVE ONE PEDESTRIAN FATALITY.



DOT HS 809 456

April 2003

Technical Report

Pedestrian Roadway Fatalities

SEED HUMPS WILL ONLY BE PLACED ON RESIDENTIAL STREET.
ONLY 10%* OF ALL PEDESTRIAN FATALITIES OCCUR ON RESIDENTIAL STREETS.
SPEED HUMPS COULD ONLY HELP IN 10% OF ALL PEDESTRIAN FATALITIES.

SPEED HUMPS REDUCES SPEED, AND ONLY 7%* OF PEDESTRIAN FATALITIES
HAVE SPEED AS A FACTOR. SPEED HUMPS COULD ONLY HELP IN 7% OF THE FATALITIES

SPEED HUMPS COULD ONLY HELP IN .7% (10% X 7%) OF ALL PEDESTRIAN FATALITIES.
FROM 2005 THRU 2009 THERE WAS AN AVERAGE OF 2.6 FATALITIES EACH YEAR.

THE NUMBER OF PEDESTRIAN THAT SPEED HUMPS COULD SAVE IS .0182 (.7% X 2.6)
LIVES EACH YEAR. IT WOULD TAKE 55 (1/.0182) YEARS FOR SPEED HUMPS TO SAVE
A SINGLE PEDESTRIAN FATALITY.

IN OXNARD A 30 SECOND DELAY OF EMERGENCY RESPONSE VEHICLES WOULD CAUSE
13** "SUDDEN CARDIAC ARREST" (SCA) DEATHS EACH YEAR.

IN OXNARD FOR SPEED HUMPS TO SAVE ONE PEDESTRIAN FATALITY IN
55 YEARS IT WOULD CAUSE AN EXTRA 715 (55 X 13) SCA DEATHS

NOTE 1* U.S. DOT NHTSA DOT HS 809 456 "PEDESTRIAN HIGHWAY FATALITIES"

NOTE 2** "TRAFFIC CALMING PROGRAMS & EMERGENCY RESPONSE" BY LES BUNTE.
THE NUMBER OF 13 SCA DEATHS FOR OXNARD WAS SCALED FROM THIS REPORT'S
37 SCA DEATHS IN AUSTIN, TX. IN 2000, AUSTIN HAD 2.86 THE POPULATION OF
OXNARD IN 2011. SCALING TO OXNARD THERE WOULD BE 13 (37/2.86) SCA DEATHS
EACH YEAR. THE REPORT'S 37 SCA DEATHS IS ACTUALLY 56 SINCE THE AUTHOR
ROUNDED UP THE NUMBER OF PEDESTRIAN FATALITIES/YEAR FROM .66 TO 1

4.17 Driver Related Factors when a Pedestrian was Killed, by Year

Table 18 shows the number of drivers involved when a pedestrian was killed with the police-reported driver-related factors by year. The driver factors shown are some of the major factors that were reported by the police on their report. The data show that most of the drivers did not have any driver-related factors mentioned in the police accident report. All other driver factors are combined together consisting of about 75 other driver-related factors since the individual numbers were too small to list. Some of the factors relating to the driver like being inattentive, failure to keep in proper lane, failure to yield right of way, driving too fast for conditions and hit-and-run vehicle driver indicate the risks pedestrians encounter on roadways due to the driver actions. The sum of the numbers is greater than total drivers involved, as more than one factor may be present for the same driver.

Driver Related Factors	Year			
	1998	1999	2000	2001
None	2,494	2,237	2,217	2,260
Inattentive	309	330	304	312
Failure to Keep in Proper Lane	247	278	280	263
Operating a Vehicle in Erratic and Reckless Manner	149	137	139	148
Failure to Yield Right-of Way	334	328	337	297
Driving too Fast for Conditions	332	347	283	311
Hit and Run Vehicle Driver	734	712	652	691
Non-Traffic Violation (offense committed without malice)	190	187	136	141
Other Non-Moving Traffic Violations	231	234	210	167
All Other Factors	822	848	784	865
Total Drivers Involved	4,702	4,400	4,248	4,354

Source: NCSA, NHTSA, FARS 1998-2001

SPEEDING IS ONLY A FACTOR IN 7% (332/4702) OF THE PEDESTRIAN FATALITIES.

4.18 Pedestrian Fatalities by Posted Speed Limit and Year

Table 19 shows the number of pedestrian fatalities by posted speed limit and year. Most pedestrian fatalities in **single vehicle crashes** occur on roads with a posted speed limit between 30-39 miles per hour followed by a posted speed limit of 50 and over miles per hour.

Posted Speed Limit	Year			
	1998	1999	2000	2001
Less than 30	491	476	462	458
30-39	1,507	1,397	1,377	1,337
40-49	1,190	1,108	1,008	1,078
50 and Over	1,424	1,351	1,322	1,341
Unknown	189	184	171	247
Total	4,801	4,516	4,340	4,461

Source: NCSA, NHTSA, FARS 1998-2001

4.19 Vehicles with Speeding as a Factor when a Pedestrian was Killed, by Year

NHTSA considers a crash speed ing-related if the driver w as charged with a speeding-related offense or if an officer indicated that racing, driving too fast conditions, or exceeding the posted speed lim it was a contribu ting factor in the crash. Most of the vehicles involved when a pedestrian was killed did not have speeding as a factor recorded in the crash. Less than 10 percent of the vehicles had speeding recorded as a factor in the crash. Table 20 shows the num ber and percen t of vehicles involved by year with speeding as a factor in the crash.

Year	Speeding Factor				Total
	Speeding		Not Speeding		
	Number	Percent	Number	Percent	
1998	336	7	4,405	93	4,741
1999	351	8	4,095	92	4,446
2000	291	7	3,992	93	4,283
2001	317	7	4,073	93	4,390

Source: NCSA, NHTSA, FARS 1998-2001

SPEED HUMPS REDUCES SPEED, AND SPEED IS A FACTOR IN ONLY 7% OF THE PEDESTRIAN FATALITIES.

Messages indicating that pedestrians should wear clothing that is more visible during these light conditions and to be extremely careful while crossing or on the roadways may help alleviate this problem. Messages should also be directed to operators of motor vehicles to be cautious during these light conditions and to watch for pedestrians on roadways. Improving the lighting on the public roadways may also help alleviate the problem of conspicuity of pedestrians.

5.5 Pedestrian Fatalities by Hit-and-Run Crashes

Almost 20 percent of the pedestrian fatalities were a result of hit-and-run crashes. This information must be highlighted to the enforcement community and also to operators of motor vehicles to help reduce the number of pedestrian fatalities in hit-and-run motor vehicle crashes.

5.6 Driver Related Factors when a Pedestrian Fatality Occurred

Some of the factors relating to the driver like being inattentive (7 percent), failure to keep in proper lane (6 percent), failure to yield right of way (7 percent), driving too fast for conditions (7 percent) and hit-and-run vehicle driver (16 percent) indicate the risks pedestrians encounter on roadways due to the driver actions.

5.7 Pedestrian Fatalities by Related Factors in the Crash

Four of the major factors in the crash when a pedestrian was killed were actions relating only to the pedestrian. The factors recorded were:

- Improper Crossing of Roadway or Intersection (29 percent)
- Walking, Playing, Working, etc., in Roadway (25 percent)
- Failure to Yield Right-of-Way (14 percent)
- Darting or Running into Road (12 percent)

Work should be undertaken to better understand these factors and identify strategies, enforcement, education and engineering to reduce the problem among pedestrians.

5.8 Pedestrian Fatalities by State and City

Based on the pedestrian fatality rates per 100,000 US resident population, New Mexico had the highest fatality rate followed by Arizona among all states. In the ranking of cities based on pedestrian fatality rates, 5 of the top 10 cities were in Florida. The 3 cities with the highest fatality rates were in Florida.