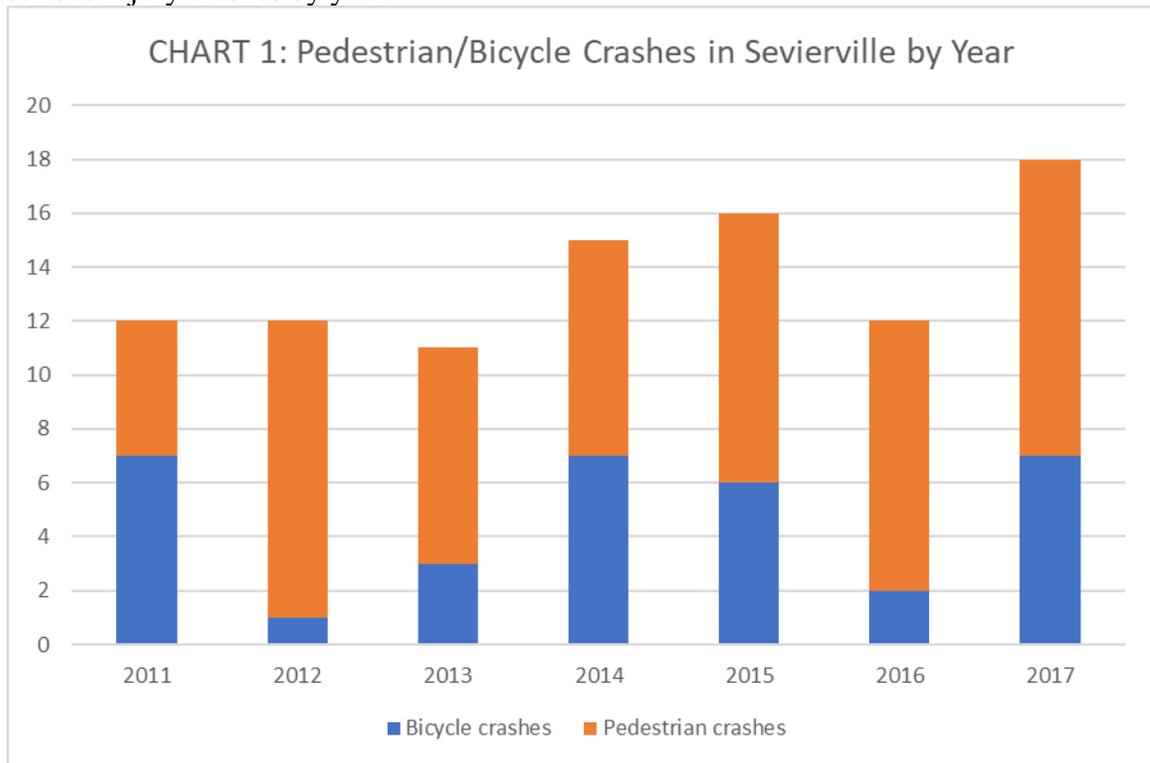


Sevierville ped/bike crashes: Nov. 2010-March 2018

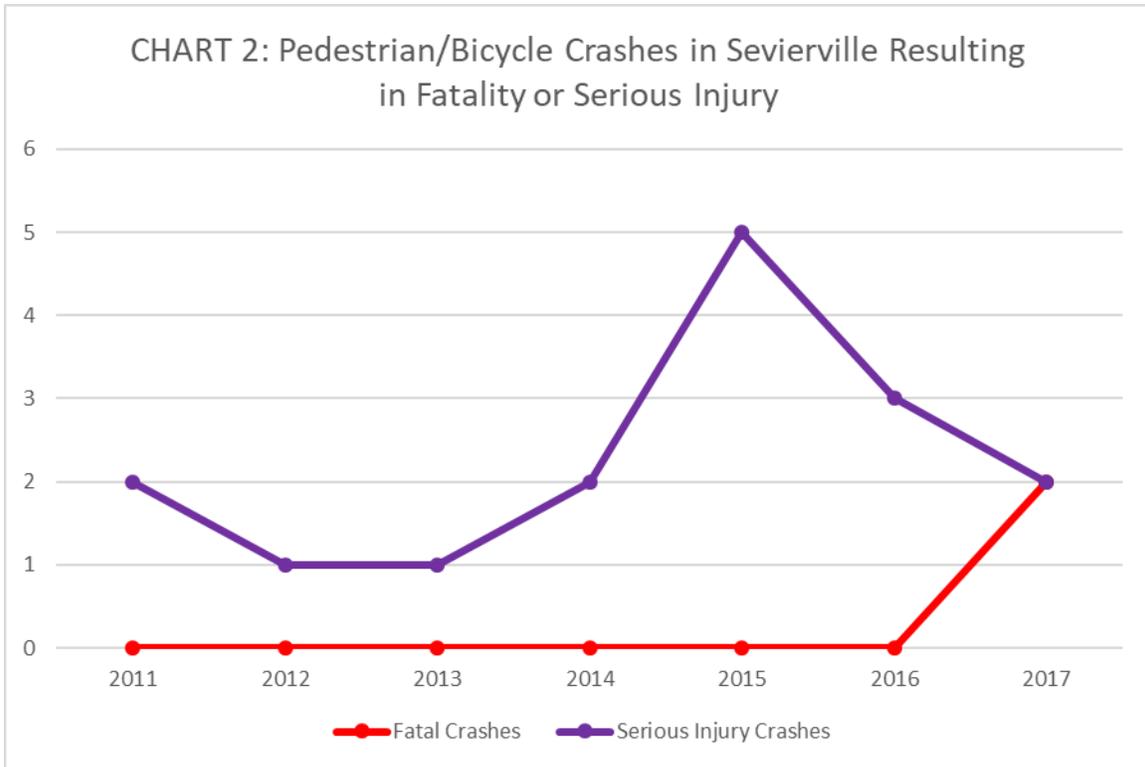
Overview

- Between November of 2010 and March of 2018, there were 99 crashes involving either pedestrians or bicyclists. This results in a rate of 1.1 crashes per month, 13 crashes per year.
- 66 crashes (67 percent) involved pedestrians, and 33 involved bicyclists.
- Most of the crashes (93 percent) involved the injury or death of a person walking or bicycling.
 - 90 crashes involved injuries only, and another 2 involved a fatality. Of the 2 fatalities, both were killed while walking.
 - 19 percent of injury-only crashes involved serious injuries.¹
- Chart 1 shows the number of crashes by year. Chart 2 shows the number of fatal and serious injury crashes by year.



Ped	5	11	8	8	10	10	11
Bike	7	1	3	7	6	2	7
Total	12	12	11	15	16	12	18

¹ Crash reports rank the severity of crashes as either fatal, suspected serious injury, suspected minor injury, possible injury, or no injury. Suspected serious injury crashes used to be reported as “incapacitating,” and suspected minor injury were reported as “non-incapacitating.” For this report, suspected serious and incapacitating crashes are combined as “serious injury” crashes.



- 43 of the 99 crashes (43%) occurred on major arterials. 24 of the major arterial crashes involved people bicycling, while 19 involved people walking. One crash was a fatality (a pedestrian), and 10 involved serious injuries (6 bicyclists, 4 pedestrians).
- Nearly half (44%) of the major arterial crashes occurred on the Parkway (U.S. 441). 8 each took place on the Dolly Parton Parkway and the Winfield Dunn Parkway. 7 occurred on the Forks of the River Parkway, and 1 on West Main Street.

Types of crashes analyzed in this report

This report analyzes certain crash factors. It focuses on identifying locations and behaviors where interventions – in the form of design changes, education, or enforcement – may help to prevent future crashes. 52 (53 percent) of the 99 total crashes fit into one of these categories. Categories of crashes analyzed in this report are:

- **Drivers failing to yield while turning.** These are crashes where the report indicates that the pedestrian or bicyclist was behaving properly while traveling along or across a street, and the driver failed to yield while making a turn. These crashes suggest the need for changes to the geometry of the intersections and/or to the function of the traffic signals to prevent future crashes. Education and traffic enforcement can also help prevent these types of crashes.
- **People struck by cars while walking in locations without sidewalks.** These are crashes where the report indicates the pedestrian was walking along a street without sidewalks and was struck by a car. These crashes indicate the need for sidewalks to be installed.
- **Drivers failing to yield while going straight.** These are crashes where the report indicates that the pedestrian or cyclist was crossing the street in a legal crosswalk², either marked or unmarked, and was struck by a driver. These crashes indicate the need for better design of crossing locations, which may include reducing crossing distances and the addition of signs, beacons, or signals. Education and traffic enforcement can also help prevent this type of crash.
- **Bicyclists riding in locations without safe facilities.** These are crashes where the report indicates a bicyclist was struck from behind or while riding on the sidewalk.³ These crashes indicate the need for a safe bicycle facility along a corridor.
- **People struck by cars while crossing a street outside of an intersection or marked midblock crossing.** These are crashes where the report indicates a pedestrian was struck while crossing a street at a location other than an intersection or a marked midblock crossing. These crashes suggest the need for additional crossings, as the existing crossings may be dangerous or inconvenient. Education of pedestrians can also help prevent this type of crash.
- **Bicyclists riding in an unsafe manner or location.** These are crashes where the report indicates that the bicyclist was either riding on the street against traffic, or riding at night with no lights. These crashes suggest the need for better education of bicyclists.

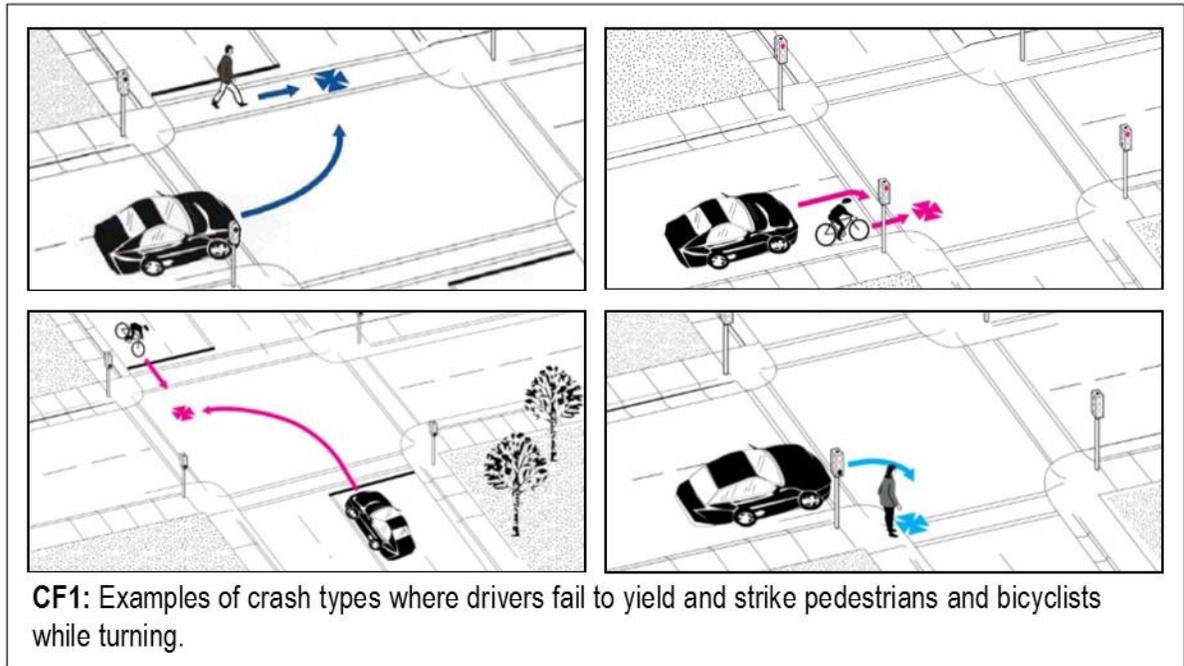
² Tennessee Code Annotated 55-8-101 (11) defines “crosswalk” as “(A) That part of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the highway measured from the curbs or, in the absence of curbs, from the edges of the traversable roadway; or (B) Any portion of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines or other markings on the surface.”

³ Riding a bicycle on the sidewalk is legal. Bicycle safety educators generally warn against it, because of the danger from turning motor vehicles.

TABLE 1: Crash Factors		Number of Crashes	Percent of Crashes*
1. Drivers failing to yield while turning (17 total crashes)	Turning left	7	14
	Turning right (not right on red)	4	8
	Turning right on red light	6	12
	Direction of turn unclear	0	0
2. Pedestrian struck while walking along corridor without sidewalks		8	15
3. Driver failing to yield while going straight		2	4
4. Bicyclist riding on sidewalk		7	14
5. Pedestrian crossing street outside of an intersection or marked crosswalk		9	17
6. Bicyclist riding against traffic		2	4
7. Driver striking bicyclist from behind		5	10
8. Bicyclist riding at night with no lights		2	4

*Percentages may not total to 100 due to rounding

Crash Factor 1: Drivers failing to yield while turning



- Of the crashes where a crash factor has been identified, 17 (33 percent) involved a pedestrian or bicyclist hit by a car whose driver failed to yield properly when turning.⁴ Of these, 7 crashes involved drivers turning left; 4 involved a right turn (not on a red light); and 6 involved a right turn on red.
- All of these crashes involved injuries, with no fatalities.
- 8 of these cases involved pedestrians, and the remaining 9 involved bicyclists. All 6 of the right turn on red crashes involved bicyclists.

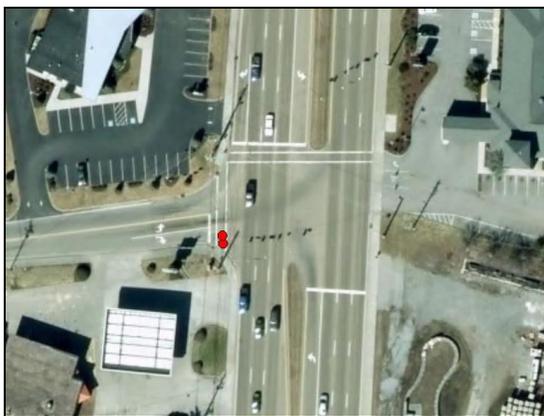
⁴ This crash factor is identified only where the bicyclist or pedestrian involved was traveling safely and within the law and the driver failed to yield.

- The crashes occurred in the following locations:

TABLE 2: Locations of failure-to-yield crashes					
Corridor	Cross street/area	Left turns	Right turn (not on red)	Right turn on red	Turn direction unclear
Dolly Parton Pkwy	Henderson Ave	1			
	Traffic signal 16.7	1		1	
Forks of the River Pkwy	Rivertrail Ln	1			
	South of Main St	1			
Parkway (U.S. 441)	Fox Rd			1	
	Entrance to Miller's Landing		1		
	New Era Rd			2	
	North of Chilhowee Dr		1		
	South Blvd			2	
	South of Lynn Dr			1	
	Traffic signal 14.8	1			
Railroad St	High St	1			
Winfield Dunn Pkwy	Access road to Floyd Garrett's Muscle Car Museum	1			
	North of Douglas Dam Rd		1		

Number in **red** indicates that crashes involved a bicyclist.

Maps 1 & 2: Locations with multiple right turn on red crashes



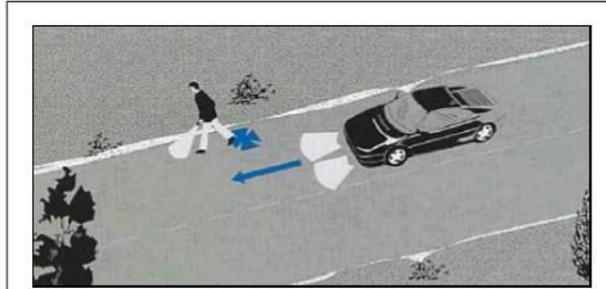
The intersection of the Parkway (U.S. 441) with South Boulevard saw two collisions at the southwest corner where drivers turning right on red failed to yield and struck bicyclists.



The intersection of the Parkway (U.S. 441) with New Era Road saw two collisions at the northeast corner where drivers turning right on red failed to yield and struck bicyclists.

Crash Factor 2: People struck by cars while walking in locations without sidewalks

In 8 (15 percent) crashes, a person walking along a street without a sidewalk was hit by a driver.⁵ 7 of these crashes involved injuries, with no fatalities. The crashes occurred in the following locations:



CF2: A frequent crash type in rural & suburban areas is pedestrians being struck while walking in locations lacking sidewalks.

TABLE 3: Locations of people being struck while walking along streets without sidewalks	
Crash occurred on this street	Near the intersection with this street
Avery Ln	Cornus Ave
Country Meadows Dr	Rivergate Dr
Douglas Dam Rd	Piney Rd
Ernest McMahan Rd	Middle Creek Rd
Nichols St	Sunnyside Ave
Old Knoxville Hwy	E Loop Rd
Old Newport Highway	Dolly Parton Pkwy
W Dumplin Valley Rd	Hodges Rd

⁵ This crash factor is identified only where the crash report finds that the pedestrian was walking along the side of the road when the crash happened, not cases where pedestrians entered the road to cross.

Crash Factor 3: Driver failing to yield while going straight

In 2 crashes, drivers were going straight and failed to yield for a person walking or bicycling across the street in a legal crosswalk, either marked or unmarked, or who otherwise has the right of way.⁶ Both of these crashes involved pedestrians in parking lots, and both involved injuries.

The crashes occurred in the following locations:

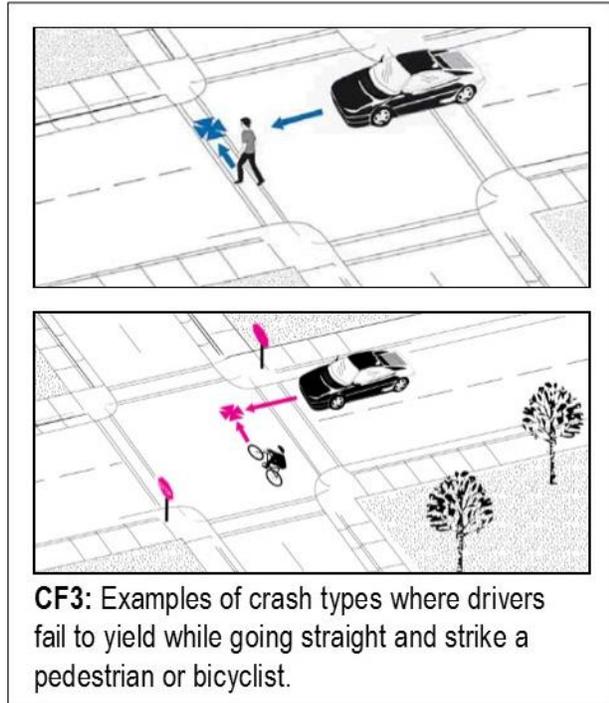
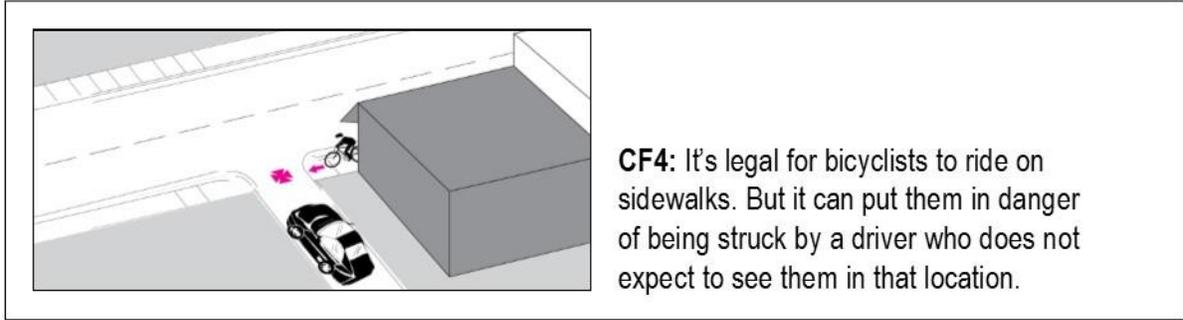


TABLE 4: Areas with pedestrians struck by drivers going straight and failing to yield	
Crash occurred on/near this street	In this area
Parkway (U.S. 441)	Walmart parking lot
Winfield Dunn Pkwy	Exxon parking lot

⁶ This crash factor is not identified where the crash report finds that the person walking or bicycling entered the street in a way that failed to give the driver sufficient time to yield the right of way.

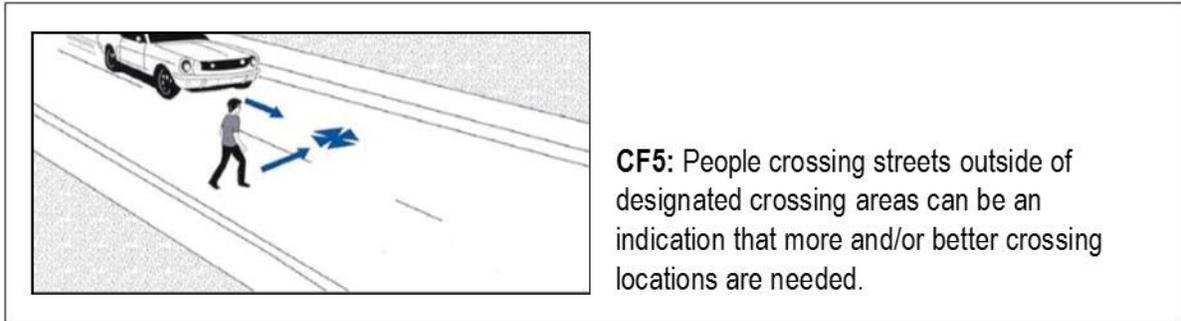
Crash Factor 4: Bicyclist riding on sidewalk



7 crashes (14 percent) were associated with bicyclists riding on the sidewalk. 5 of these crashes involved injuries, with no fatalities. 4 of the 7 crashes took place along the Parkway, and 2 along the Forks of the River Parkway. The crashes occurred in the following locations:

TABLE 5: Locations of bicyclists being struck while riding on sidewalks	
Crash occurred on this street	In this area
Dolly Parton Pkwy	East of Robert Henderson Rd
Forks of the River Pkwy	North of Rivertrail Ln (2 crashes)
Parkway (U.S. 441)	Near Chilhowee Dr (2 crashes)
	North of Carl St
	North of Denton Ln

Crash Factor 5: Pedestrian crossing street outside of an intersection or marked crosswalk



In 9 crashes (17 percent), pedestrians were crossing the street outside of an intersection or marked crosswalk. 8 of these crashes involved injuries, with 1 fatality. The crashes occurred in the following locations:

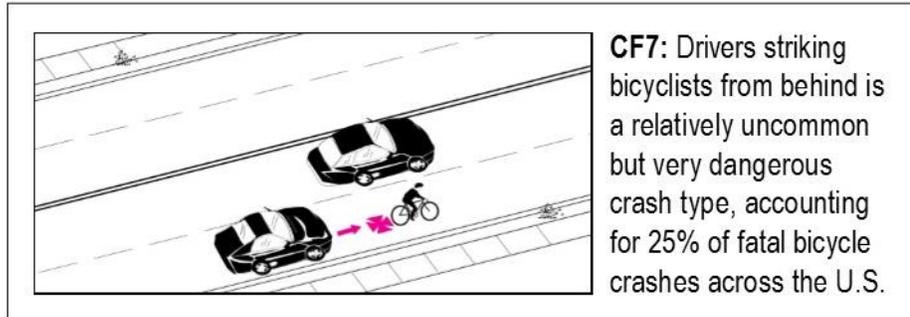
TABLE 6: Areas with pedestrians struck while crossing outside of an intersection or marked crosswalk	
Crash occurred on this street	In this area
Court Ave	South of Bruce St
Dolly Parton Pkwy	East of Veterans Blvd
	West of Industry Dr
Parkway (U.S. 441)	North of Collier Dr (fatality)
	North of John L. Marshall Dr
	North of Scenic Dr
Veterans Blvd	North of Collier Dr
Winfield Dunn Pkwy	North of North Pkwy
	South of W Dumplin Valley Rd

Crash Factor 6: Bicyclist riding against traffic

2 bicyclists were struck while riding against traffic. Both crashes involved an injury. One occurred along Forks of the River Parkway south of Main Street, and the other took place along Jersey Drive north of Topside Rd.

Crash Factor 7: Driver striking bicyclist from behind

5 bicyclists were struck from behind by drivers (10 percent of crashes). All of these crashes involved injuries, with no fatalities. The crashes occurred in the following locations:



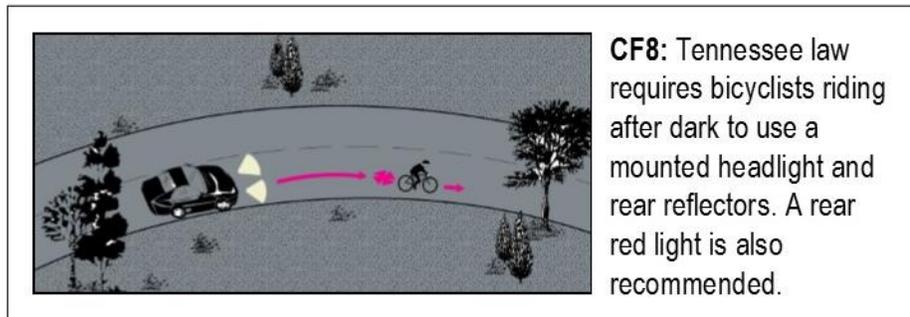
CF7: Drivers striking bicyclists from behind is a relatively uncommon but very dangerous crash type, accounting for 25% of fatal bicycle crashes across the U.S.

TABLE 7: Areas with bicyclists struck from behind by drivers

Crash occurred on this street	In this area
Dolly Parton Pkwy	West of Robert Henderson Rd
Old Knoxville Hwy	North of E Loop Rd
	South of West View St
Veterans Blvd	North of Center View Rd
Winfield Dunn Pkwy	North of Kyker Ferry Rd

Crash Factor 8: Bicyclist riding at night with no lights

2 bicyclists were struck while riding at night with no lights. They were both injury crashes, with no fatalities. Both crashes occurred along Winfield Dunn Parkway north of North Parkway.



CF8: Tennessee law requires bicyclists riding after dark to use a mounted headlight and rear reflectors. A rear red light is also recommended.

Methodology

Crash data were obtained directly from KPD (all crashes prior to June 2009) or downloaded from the TITAN database maintained by the State of Tennessee. Crashes were mapped in ArcMap GIS software based on latitude/longitude or closest intersection, where lat/long data were not available. TPO staff then reviewed the location of each crash to correct data errors. TPO staff assigned crash factors based on information obtained from individual crash reports, including crash narratives and information about citations issued.

Image credit

All crash type images are from the Pedestrian and Bicycle Crash Analysis Tool (PBCAT), which was developed by the Federal Highway Administration (FHWA), in cooperation with the National Highway Traffic Safety Administration (NHTSA). The purpose of the PBCAT is to assist with analysis of pedestrian/bicycle crashes with the goal of preventing them.