



DDOT/MPD Pedestrian-Bicycle Safety Enforcement Training

March 2, 2009

DDOT-MPD



This is fiction...

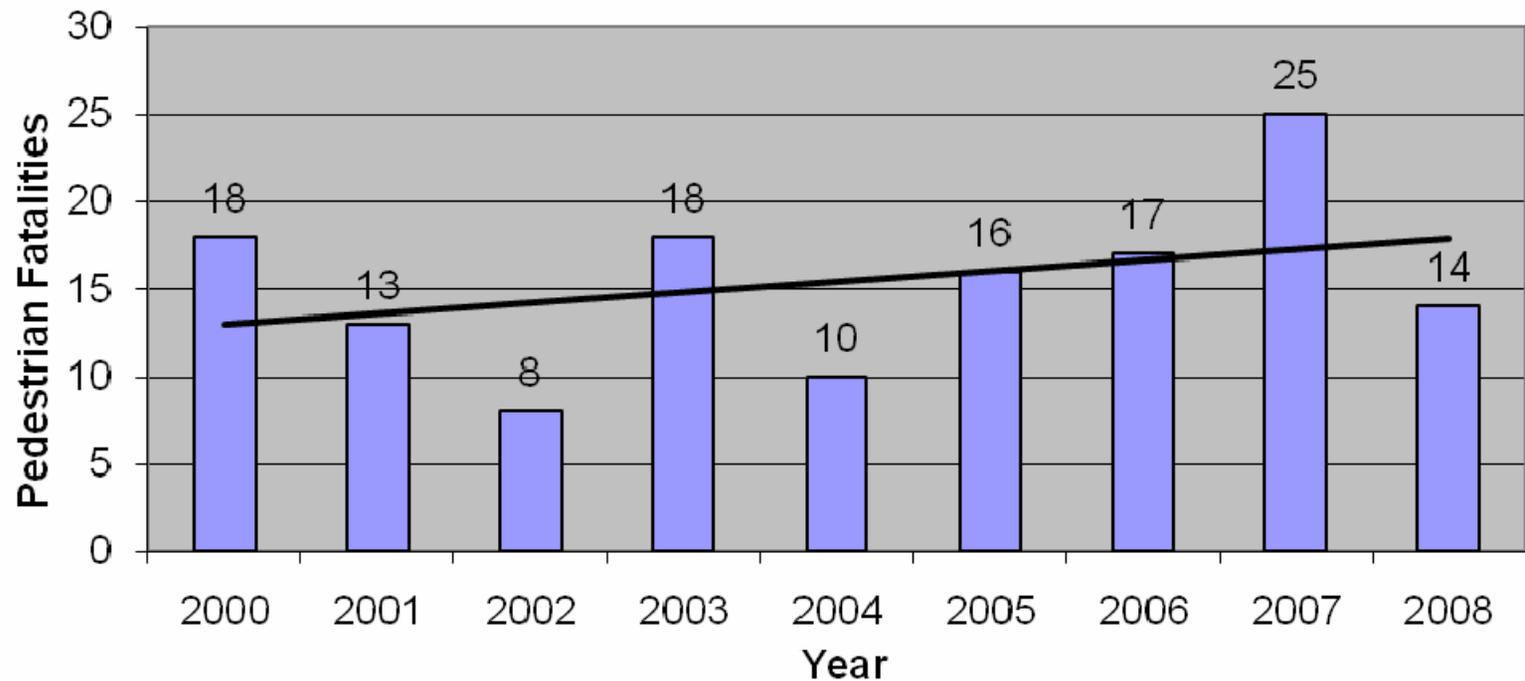


This is real.



DC Pedestrian Fatalities

DC Pedestrian Fatalities 2000-2008



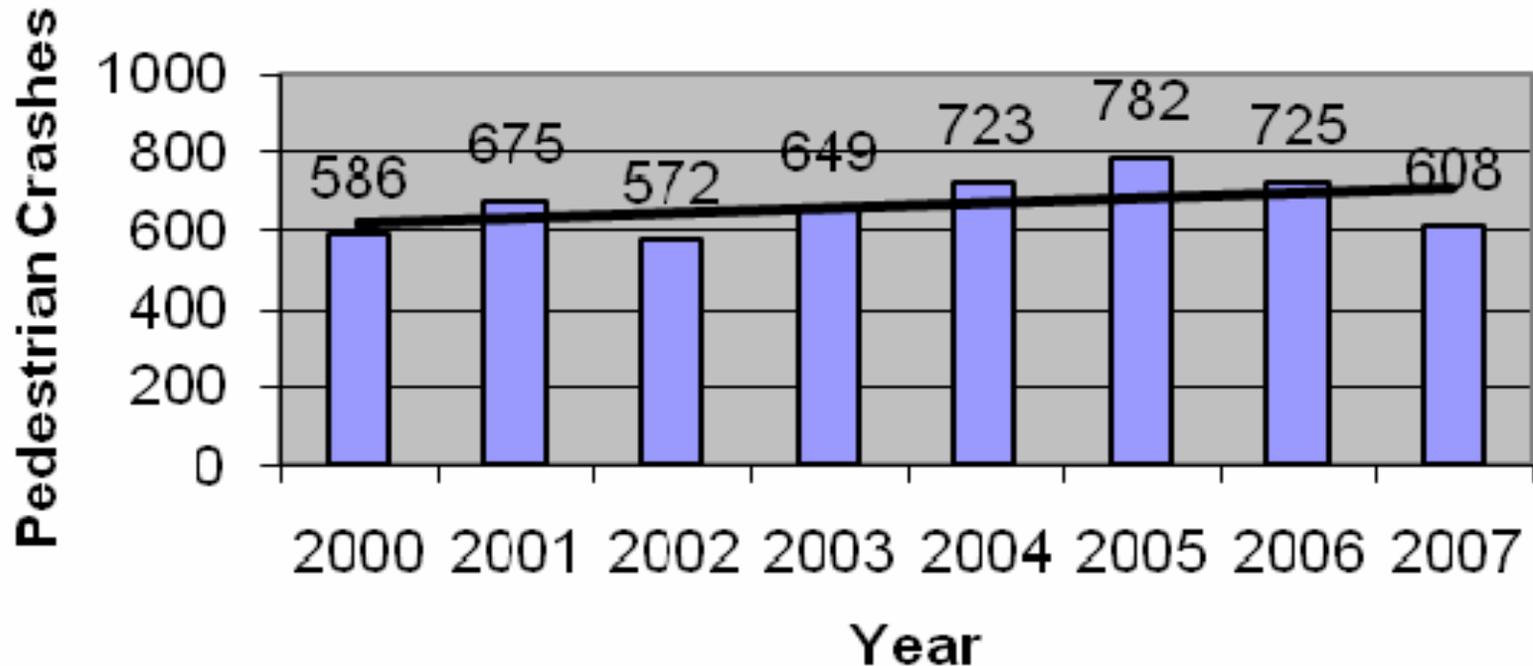


Comparison Cities, 2005

City	Total Traffic Fatalities	Ped Fatalities	Peds as Percent of Total	Ped Fatality Rate per 100,000 persons
Washington, DC	48	16	33.3	2.9
Safer Cites for Pedestrians				
Seattle, WA	33	6	18.2	1.0
Boston, MA	19	7	36.8	1.3
Portland, OR	35	8	22.9	1.5
New York, NY	323	152	47.1	1.9
San Francisco, CA	33	16	48.5	2.2
Chicago, IL	187	64	34.2	2.3
Los Angeles, CA	283	96	33.9	2.5
Less Safe Cities for Pedestrians				
Phoenix, AZ	184	64	34.2	3.2
Dallas, TX	155	46	29.7	3.7
Orlando, FL	50	9	18.0	4.2
Albuquerque, NM	65	21	32.3	4.2
Jacksonville, FL	149	34	22.8	4.3
Miami, FL	66	22	33.3	5.7

DC Pedestrian Crashes

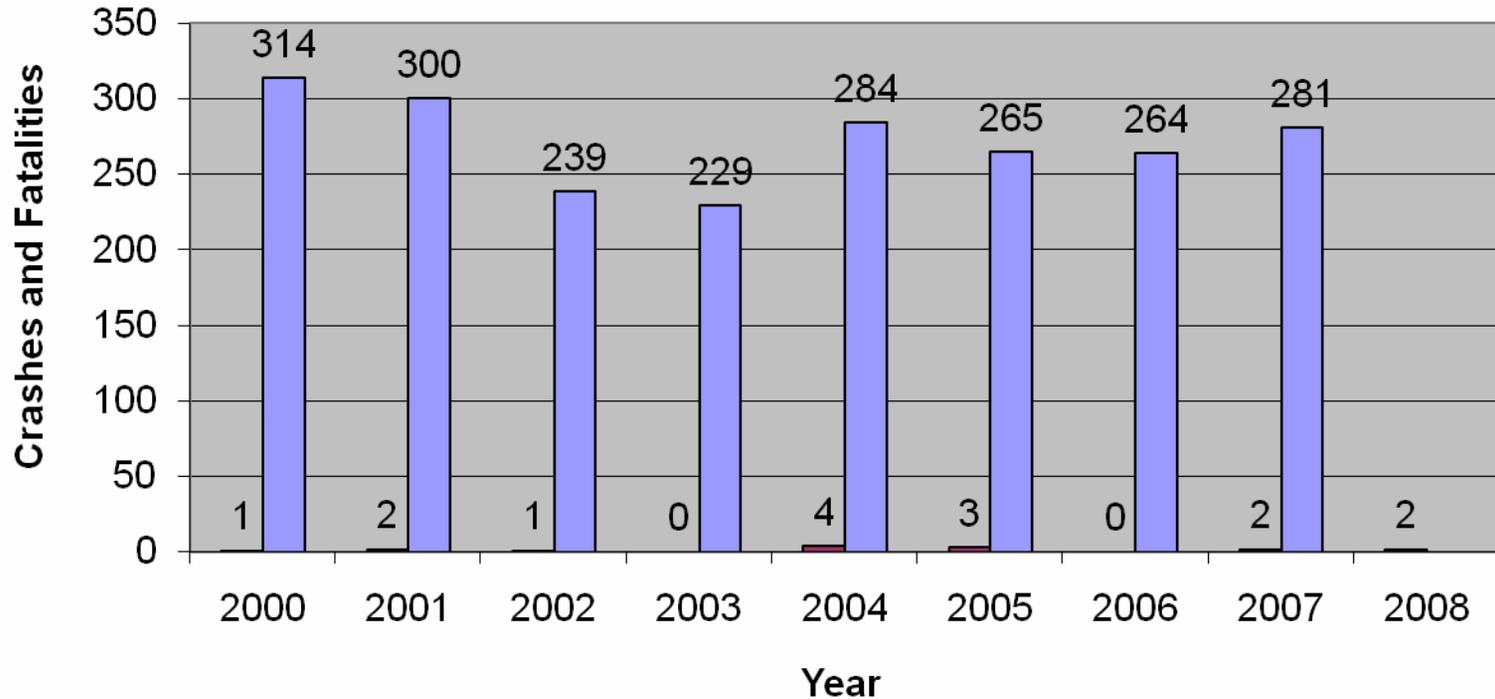
DC Pedestrian Crashes 2000-2007



DC Bicycle Crash Data (2000-2008)



Bicyclist Crashes & Fatalities: 2000-2008



**What's Your
Perspective ?**

- If you see the city through a windshield, you see pedestrian and cyclist risky behaviors.







■ Cyclists who think they “own the road”



- Sometime pedestrians get a “herd mentality”



- Some pedestrians act like Sacred Cows

We want to avoid this!



■ Translation: "Use the Crosswalks"

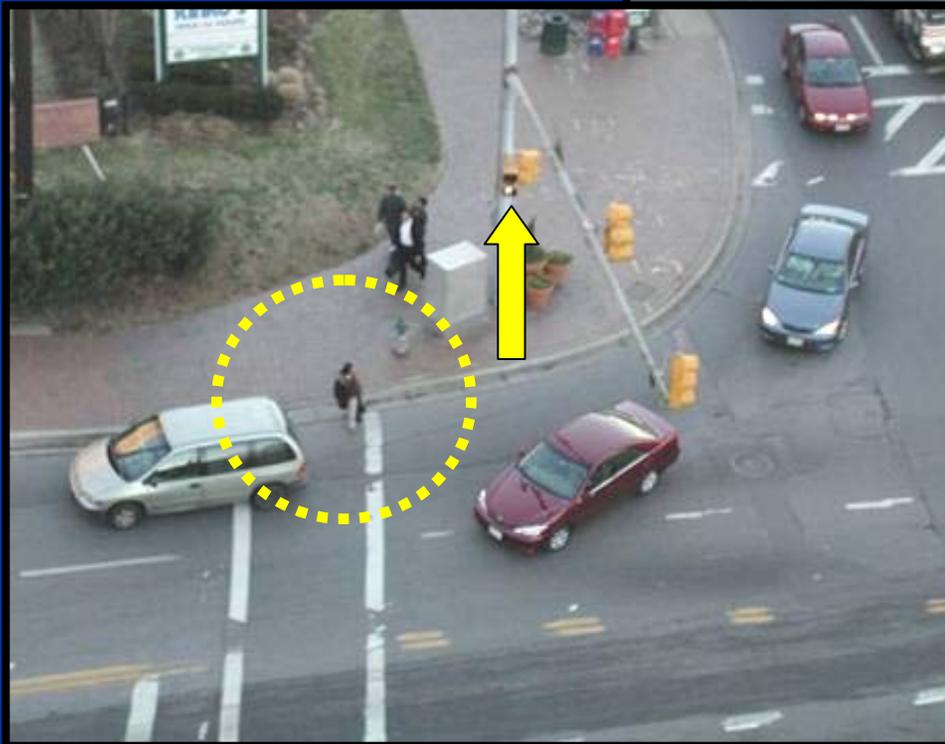
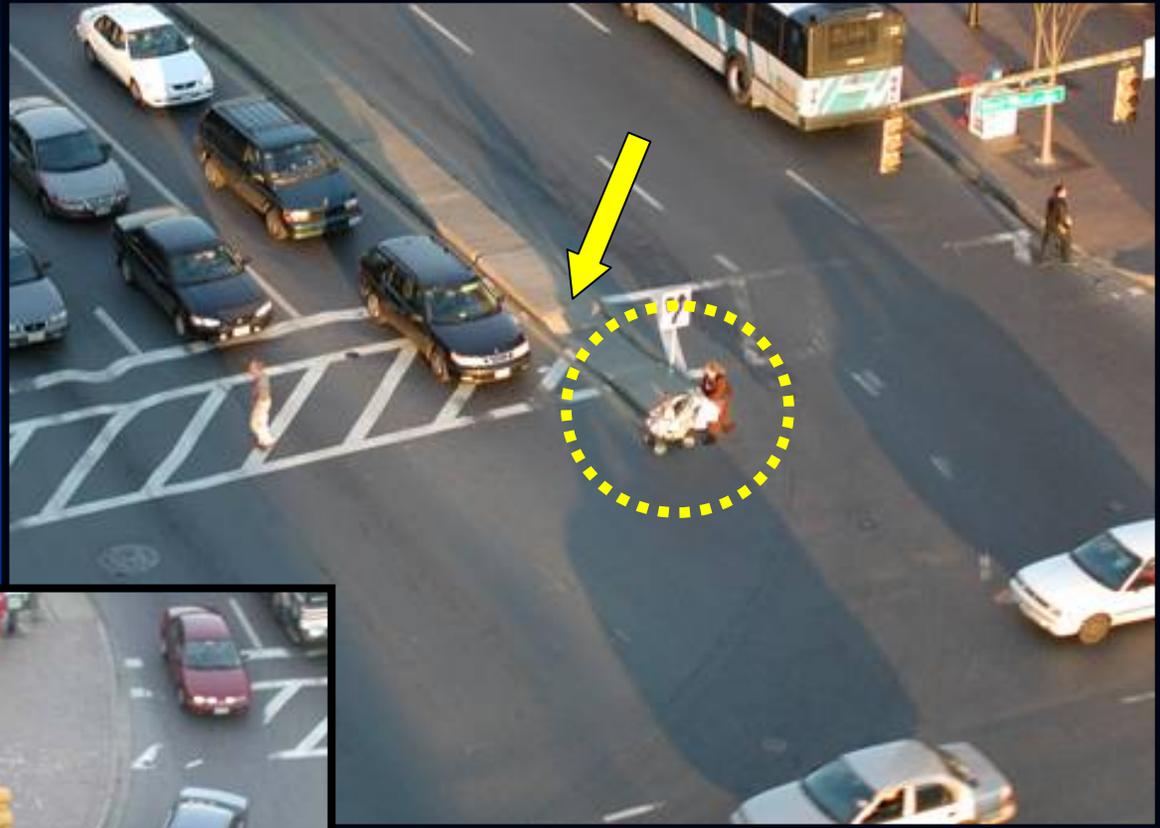
- If you see the city on foot or bike, you see motorist dangerous behaviors.



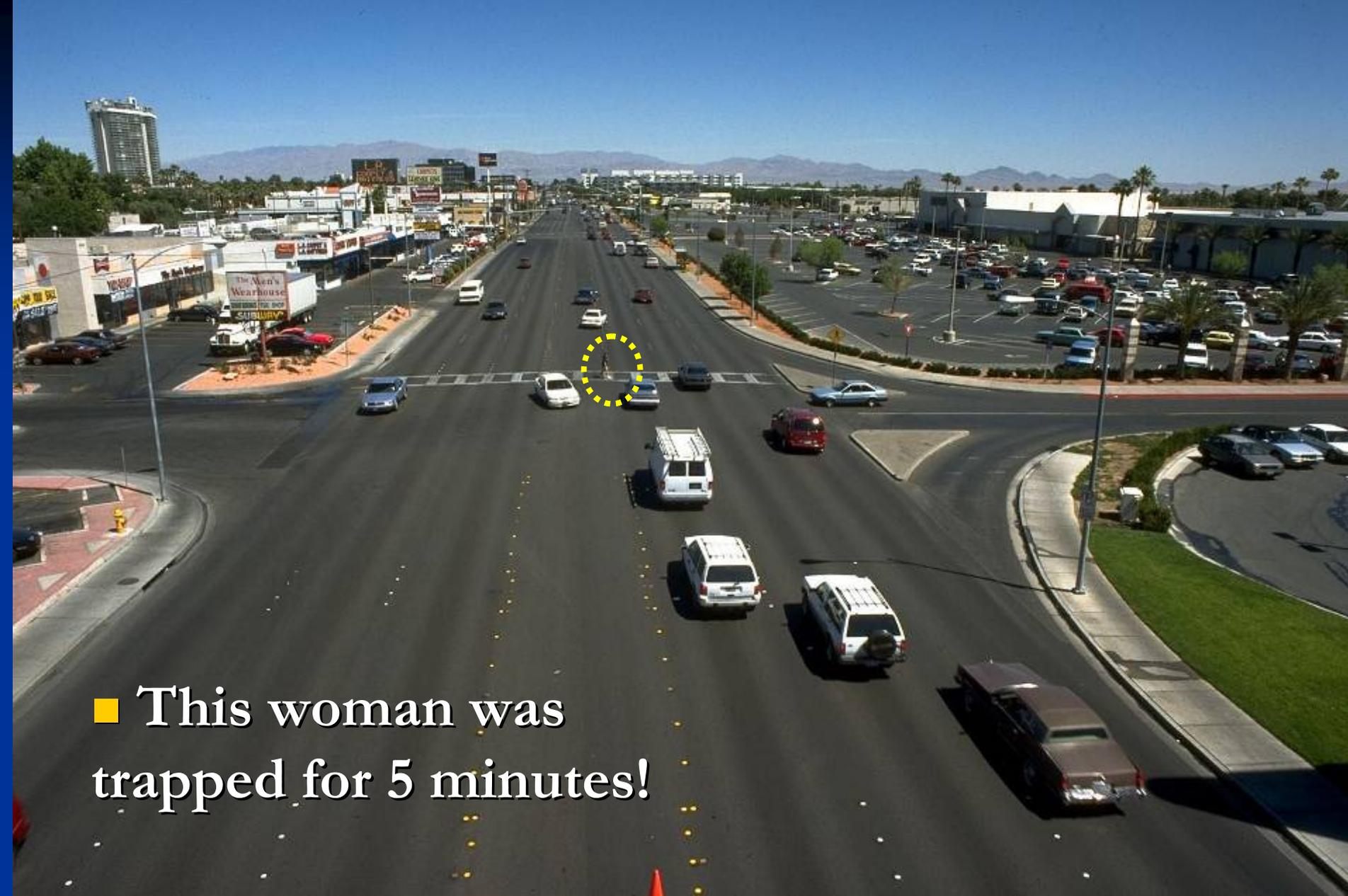


■ Right on green violation puts elderly at risk

■ Blocking crosswalk and median cut.



■ Follow the leader failure to yield to peds.



■ This woman was trapped for 5 minutes!

What part of “thou shall not park in a bike lane” do you not understand?



Pedestrian's Revenge



The Bottom Line:

- Primary role of traffic enforcement is to protect the innocent and law abiding from harm, thus reducing crashes, injuries, and fatalities.
- People on foot and bike are extremely vulnerable
- Drivers of motor vehicles (and sometimes bicycles) will always cause the harm, therefore they are the primary focus of enforcement
- Sometimes pedestrians need to be protected from themselves

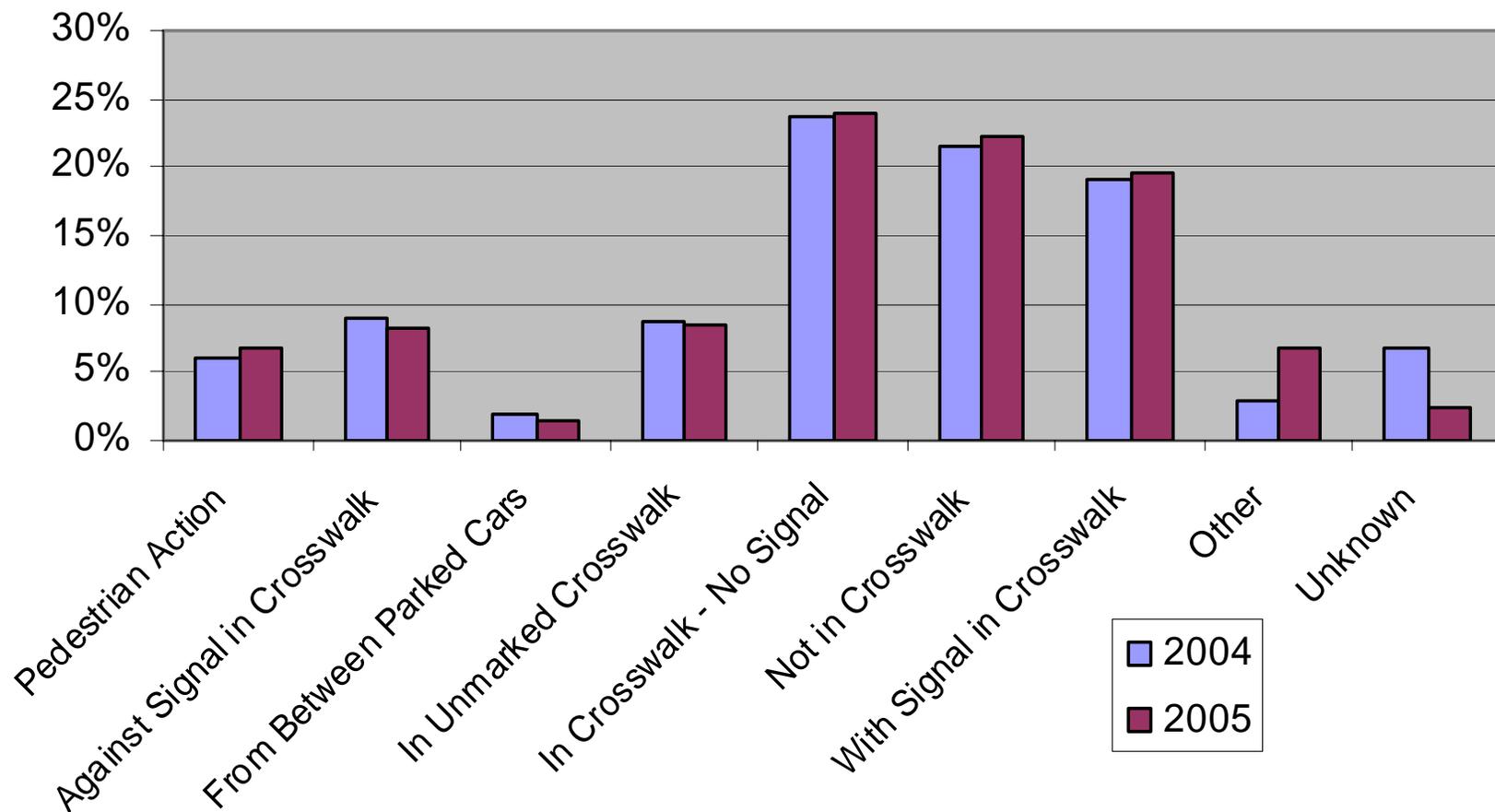


■ Safer coexistence
is possible

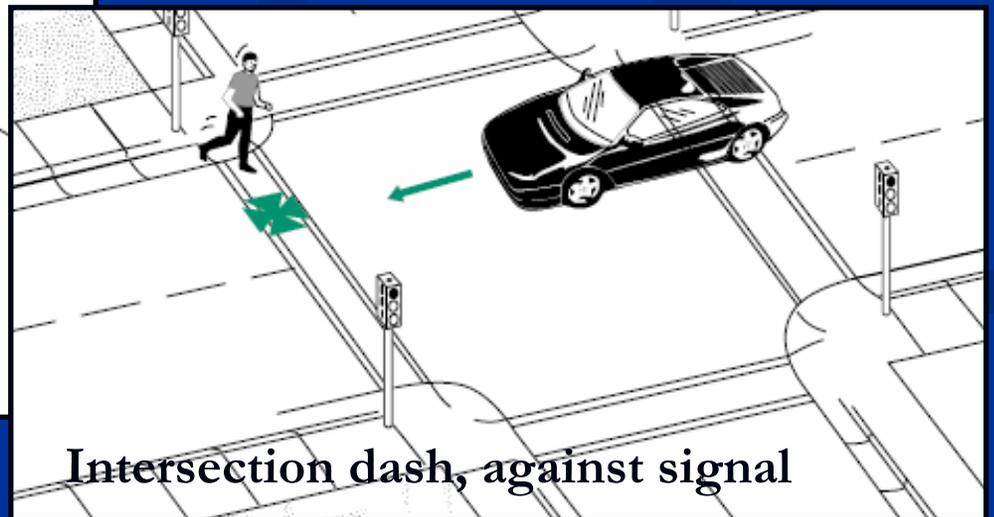
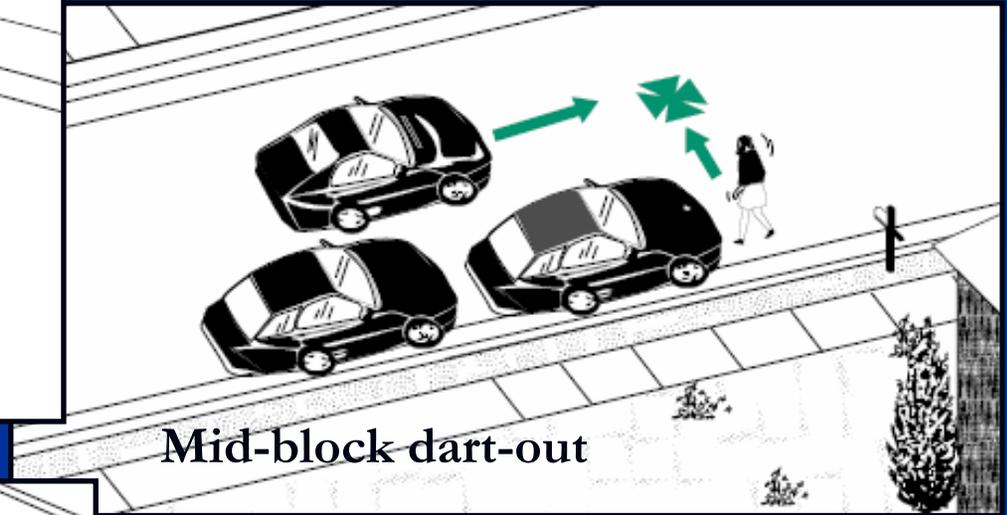
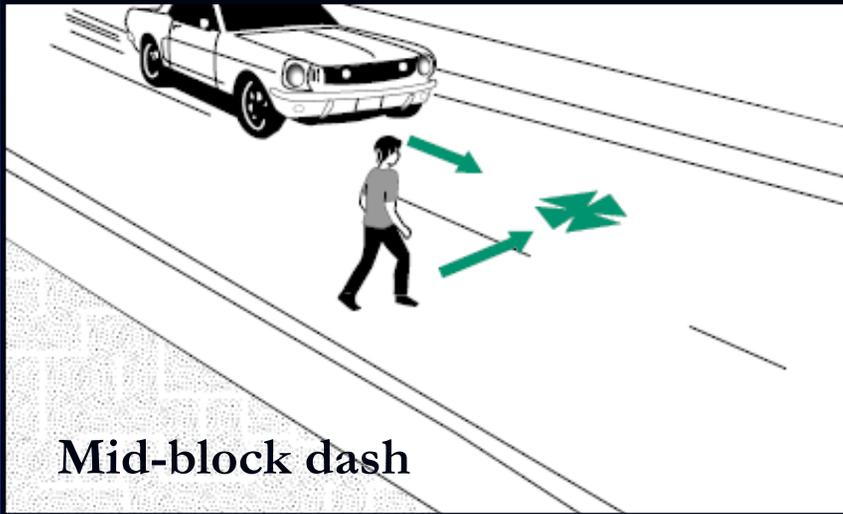
Pedestrian Crash Types

Pedestrian Action prior to Crash

Crashes Involving Pedestrians 2004-2005
Pedestrian Action

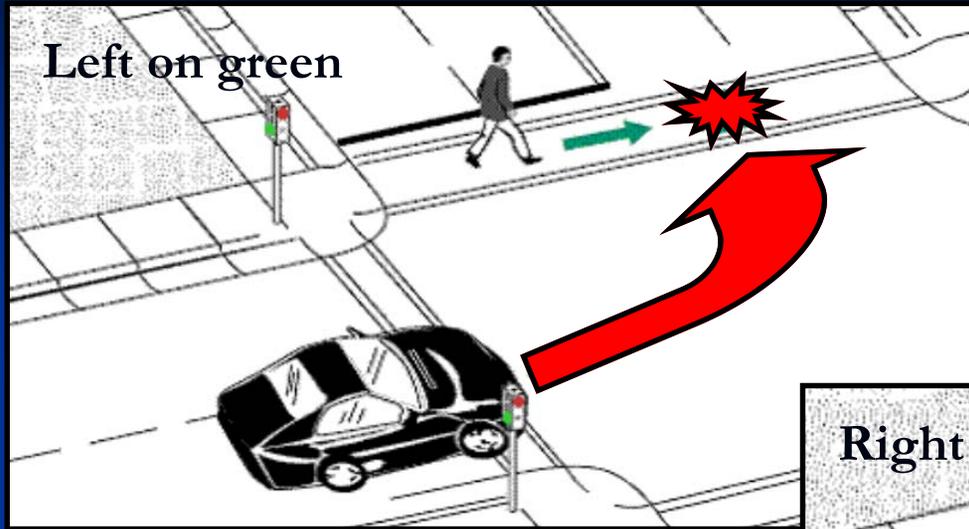


Frequent Ped At-Fault Crash Types:



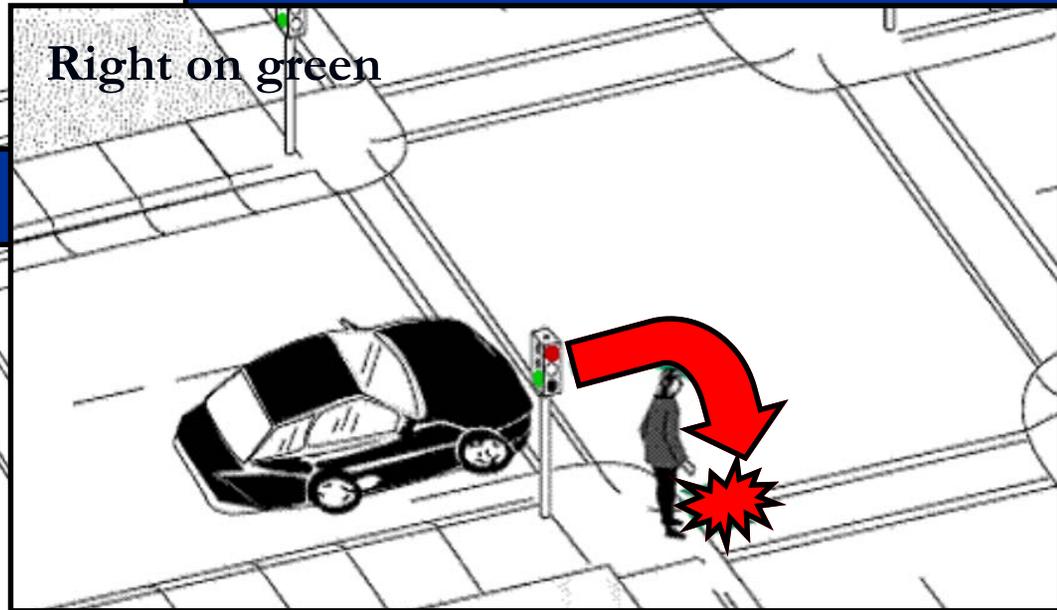
Frequent Motorist At-Fault Crash Types:

Left on green

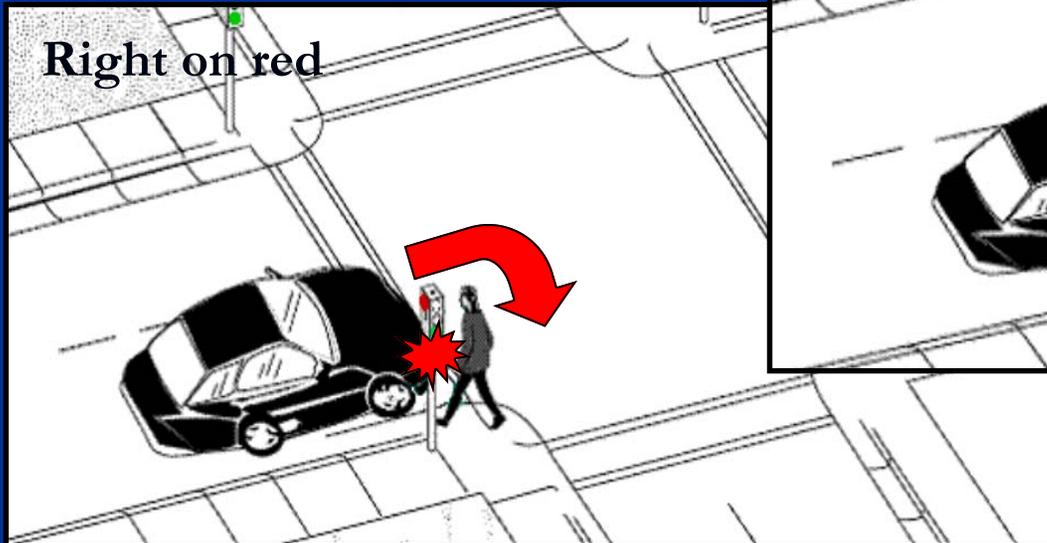


- The “Big Three” at signalized intersections

Right on green

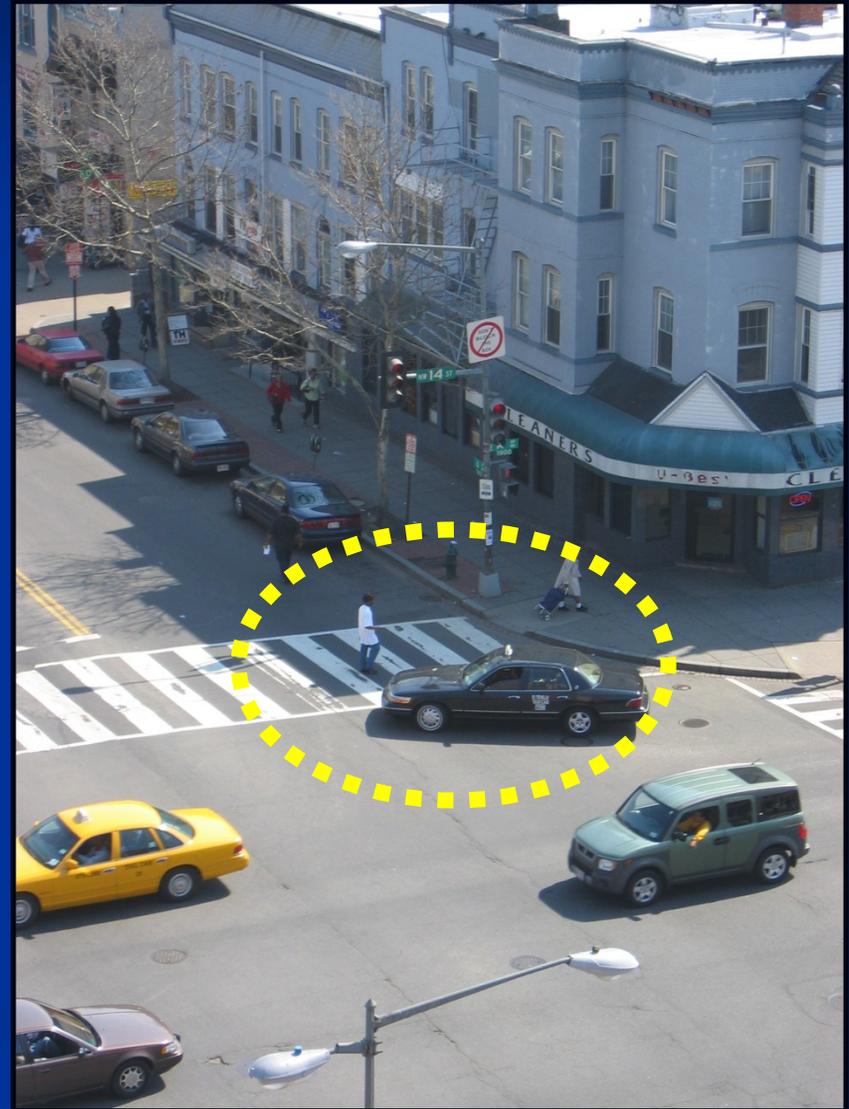
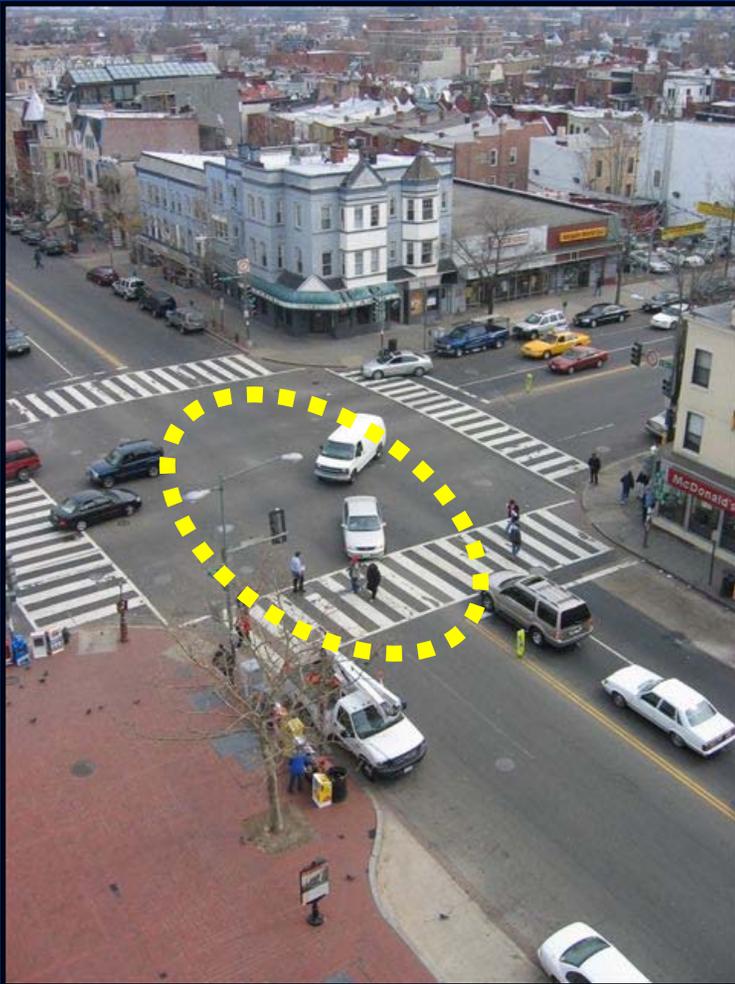


Right on red



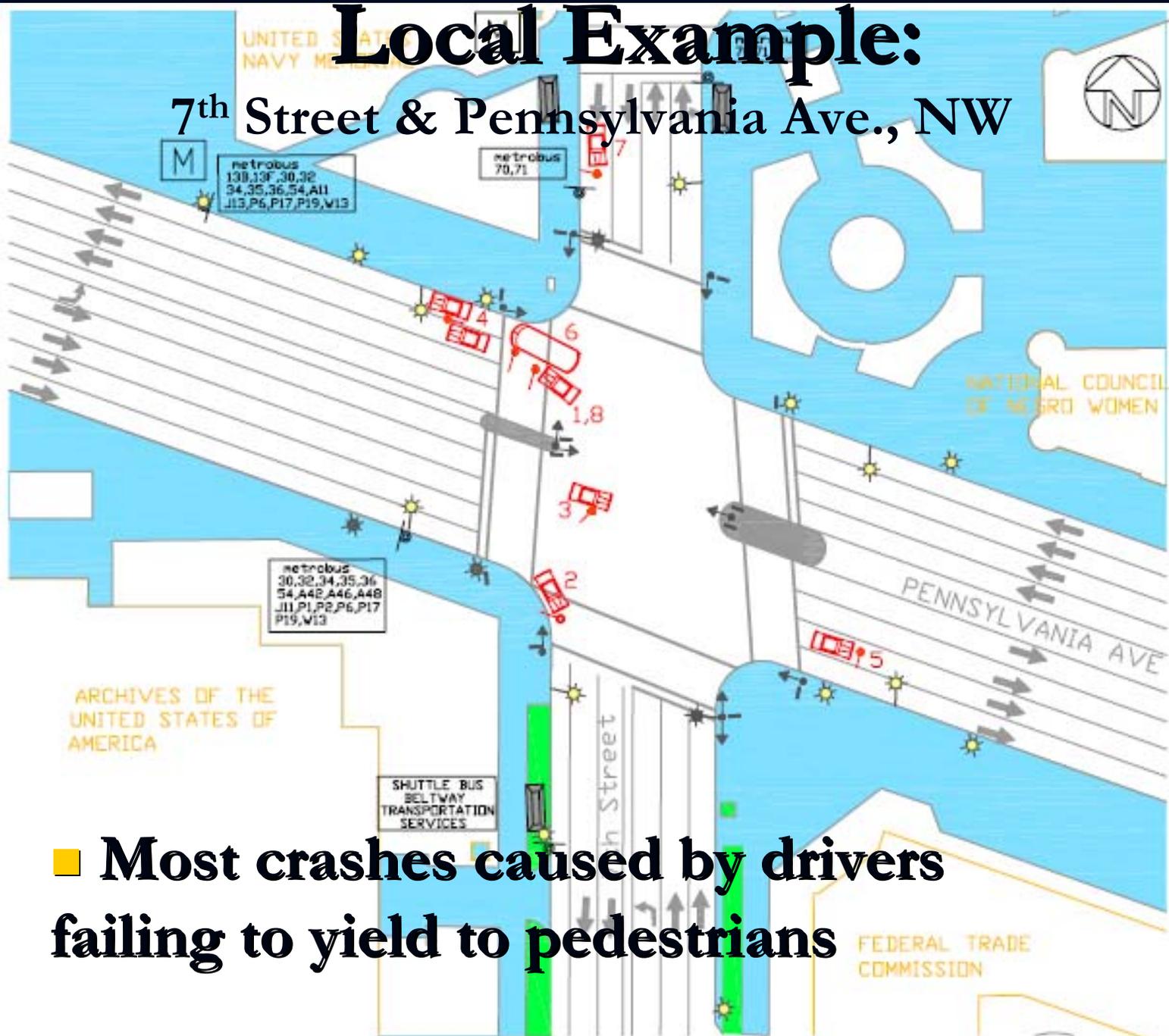
Local Example:

- 14th and U St. NW



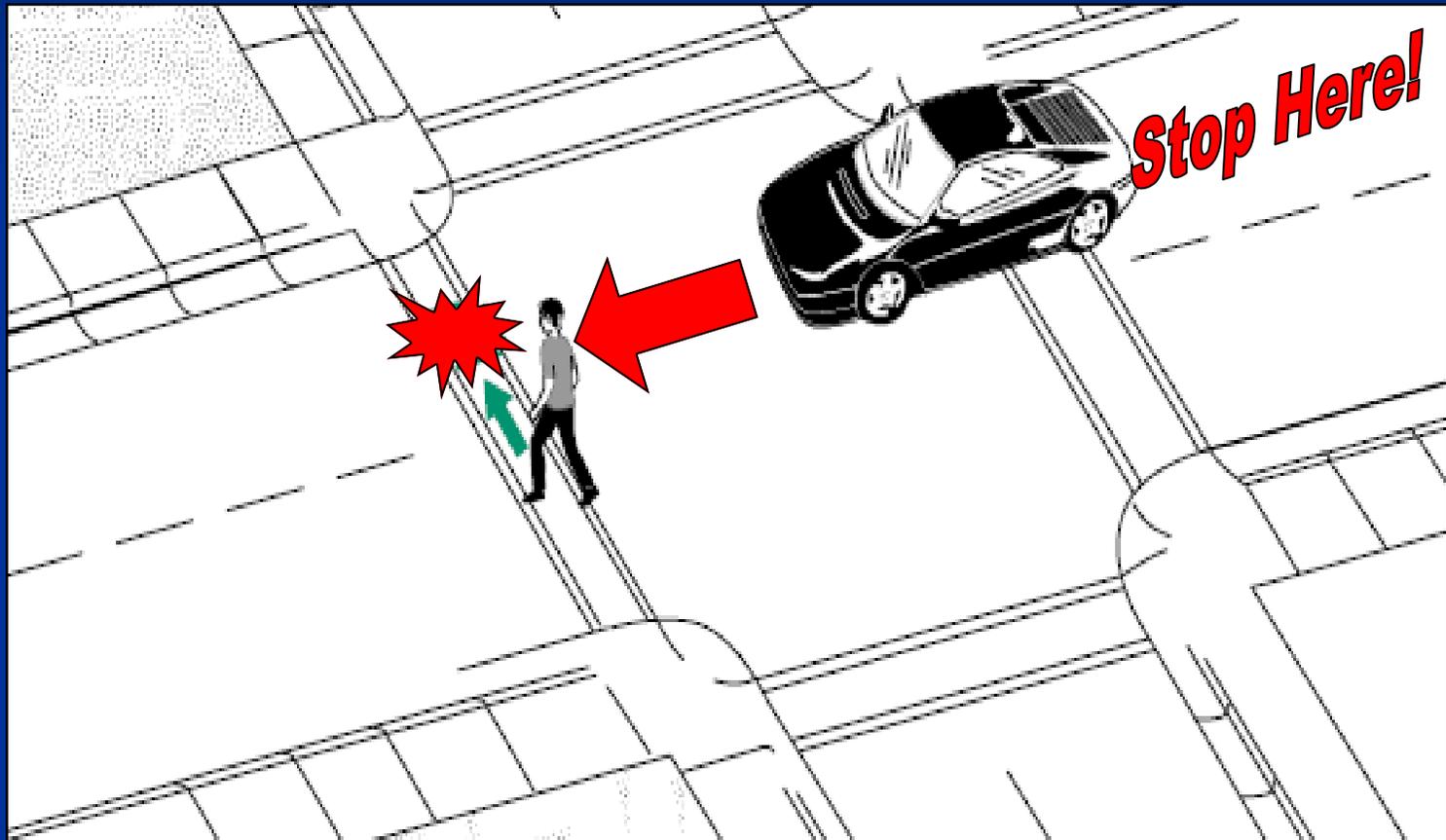
Local Example:

7th Street & Pennsylvania Ave., NW



- Most crashes caused by drivers failing to yield to pedestrians

Frequent Motorist At-Fault Crash Type:

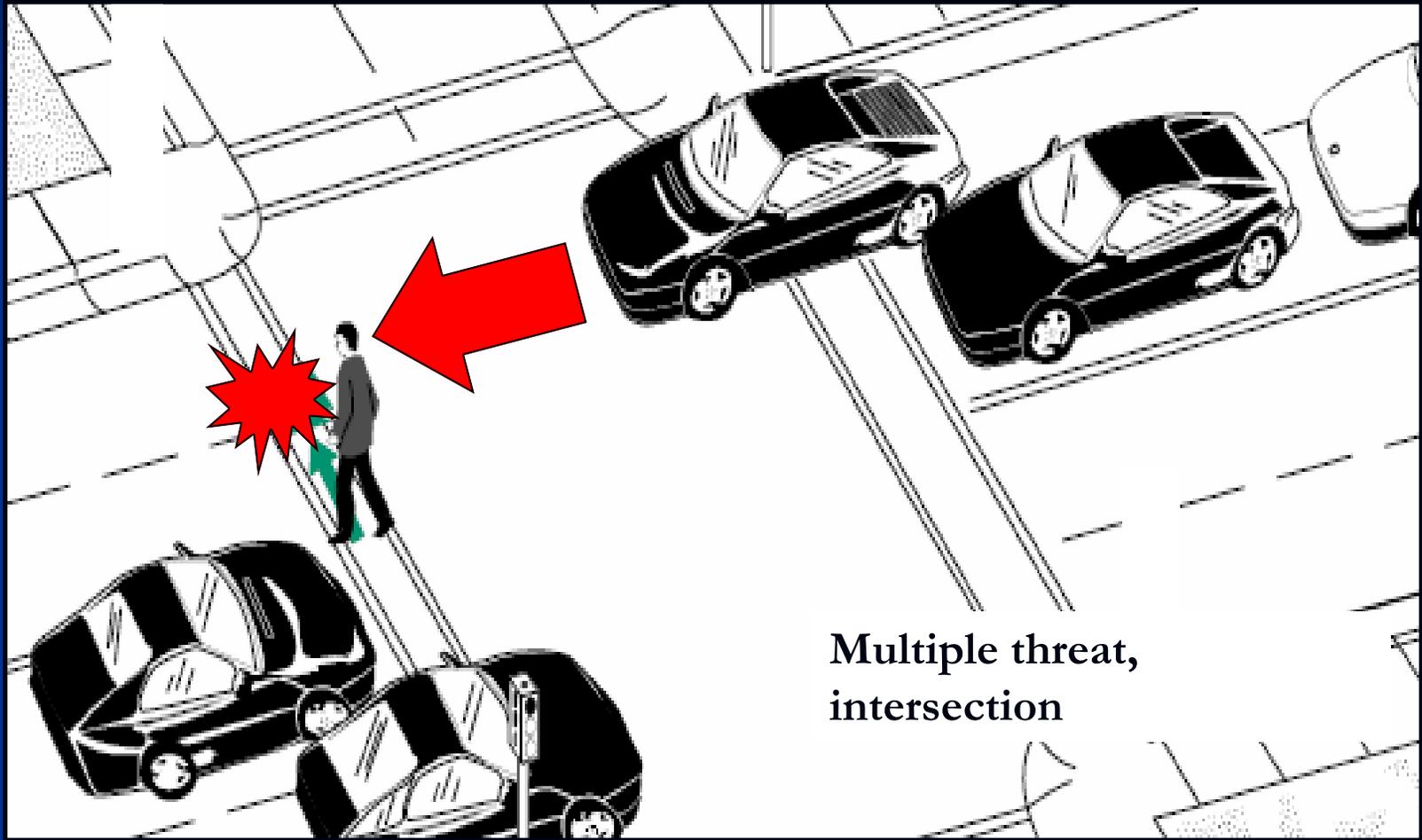


Local Example:

- 14th and Shepherd St., NW



Frequent Motorist At-Fault Crash Types:



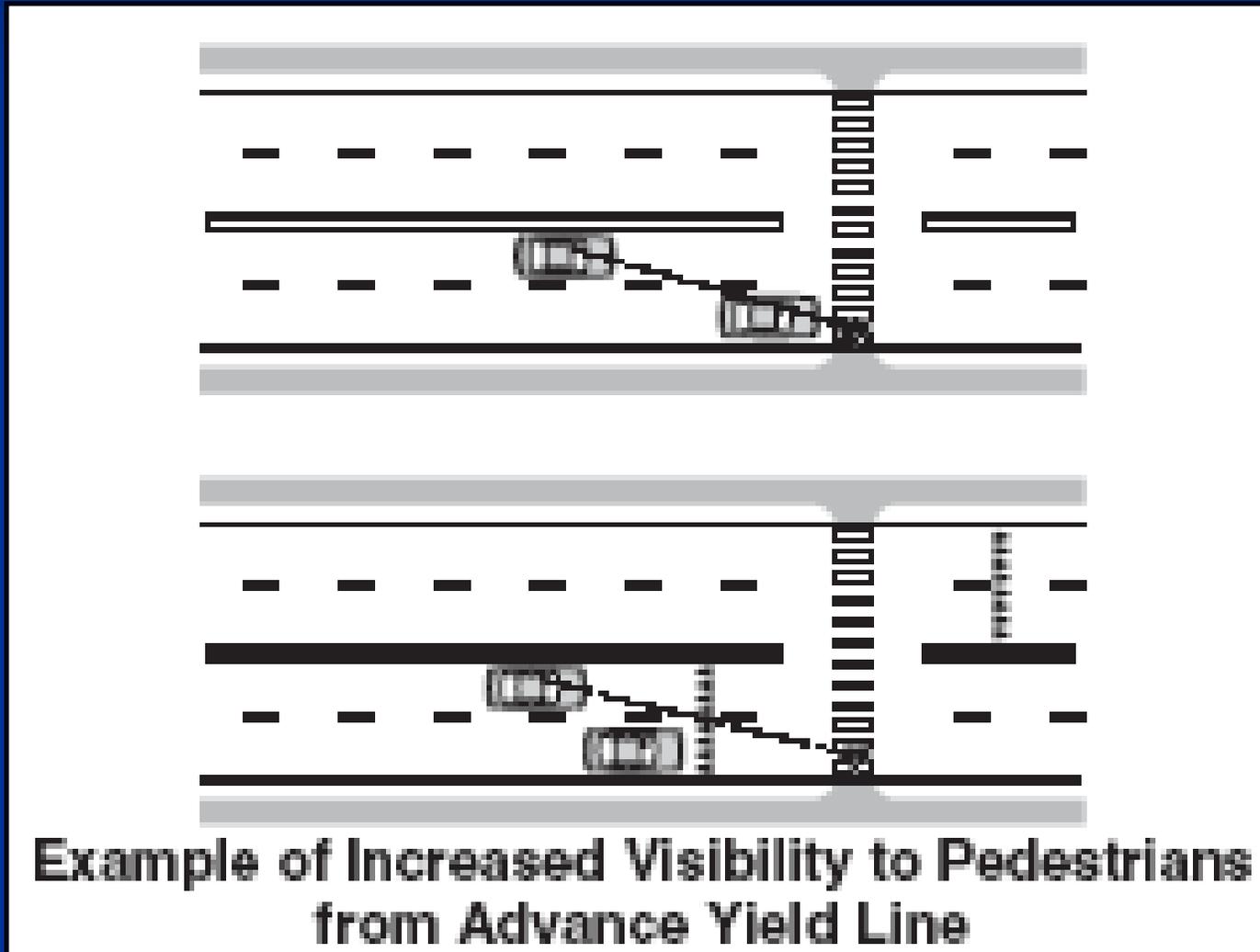
Engineering Countermeasure:

- The Rapid Flash Beacon, Brentwood Rd. and 13th Street, NE



How to prevent a multiple threat crash

- Stop 20-30 feet back from the crosswalk

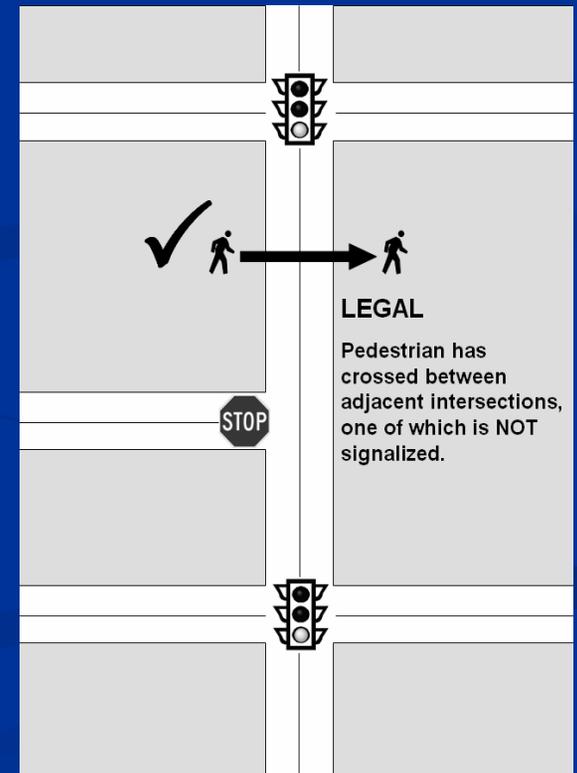
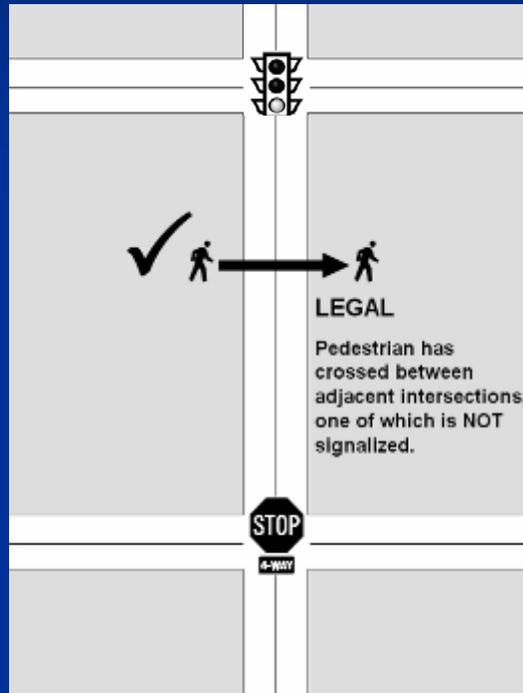
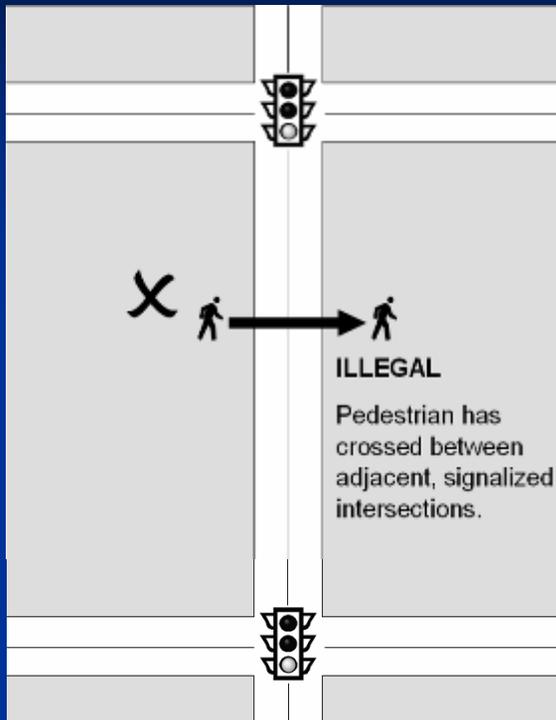


**Pedestrian
Safety
Law Review**

Target Pedestrian Laws:

<u>Statute & T-Code</u>	<u>Citation</u>	<u>Description</u>	<u>Fine</u>
2302.3 (T-575)	Walking against the "Don't Walk" signal	No pedestrians shall start to cross the roadway in the direction of a "Don't Walk" signal.	\$20
2304.1 (T-528)	Crossing between adjacent signalized intersections	Between adjacent intersections controlled by traffic control signal devices or by police officers, pedestrians shall not cross the roadway at any place except in a crosswalk.	\$20
2304.2 (T-577)	Obstructing traffic in roadway	Each pedestrian crossing a roadway at any point other than within a crosswalk shall yield the right-of-way to all vehicles upon the roadway.	\$10
2303.2 (T-528)	Walking suddenly into the path of a vehicle	No pedestrian shall suddenly leave a curb, safety platform, safety zone, or other designated place of safety and walk or turn into the path of a vehicle which is so close that it is impossible for the driver to yield.	\$20

DC Law and Mid-block Crossing



- MD law identical
- VA?

FREEZE, SCUZZBALL!
NOBODY JAYWALKS
IN THIS TOWN!

© 1974 GATLETON BRYAN BASSETT



Target Motorist Citations- Ped ROW:

<u>Statute & T-Code</u>	<u>Citation</u>	<u>Description</u>	<u>Fine</u>
50-2201.28(a) (T-011)	Failure to yield right of way to pedestrian at <u>un-signalized crosswalk</u>	(a) A driver of any vehicle shall STOP and give right of way to a pedestrian crossing the roadway within any marked crosswalk or unmarked crosswalk at an intersection.	\$250 3 pts.
50-2201.28(b) (T-759)	Failure to yield right of way to pedestrian at <u>signalized intersection</u>	(b) A driver of any vehicle shall STOP and give right-of-way to a pedestrian who has begun crossing on the "WALK" signal to continue to the opposite sidewalk or safety island, whichever is nearest.	\$250 3 pts.
2221.5 (T-781)	<u>Overtaking a vehicle stopped for a pedestrian at a crosswalk</u>	Whenever any vehicle is stopped at a marked crosswalk or at an unmarked crosswalk at any intersection to permit a pedestrian to cross the roadway, the driver of any vehicle approaching from the rear shall not overtake and pass the stopped vehicle.	\$250 3 pts.
2201.11 (T-206)	<u>Failure to clear intersection (blocking crosswalk)</u>	No vehicle shall enter an intersection or <u>marked crosswalk</u> unless there is sufficient space on the other side of the intersection or crosswalk to accommodate the vehicle without obstructing the passage of other vehicles or <u>pedestrians</u> , notwithstanding any traffic control signal indication to proceed.	\$50

Pedestrian Safety Statutes in other jurisdictions:

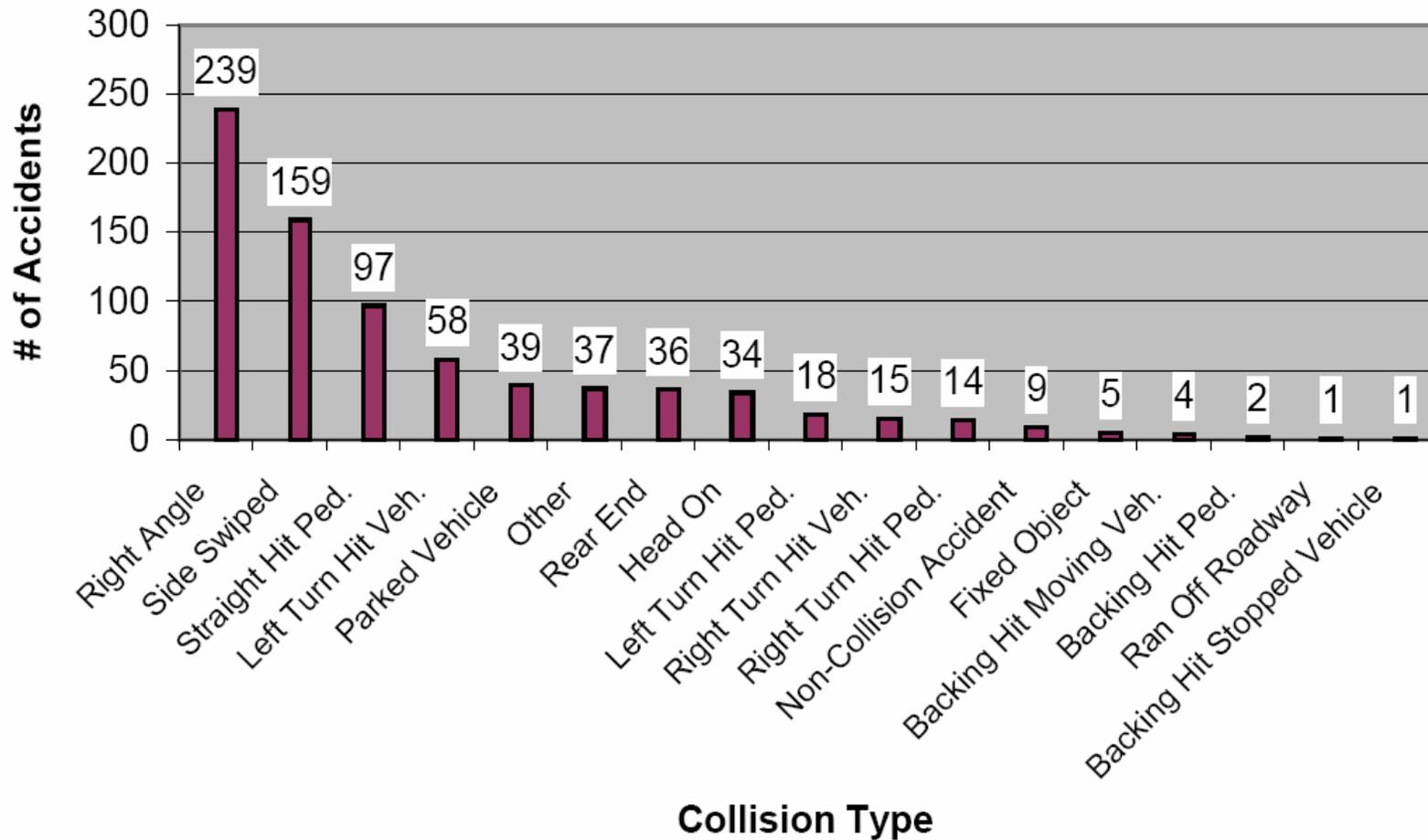
- Maryland?
- Virginia?

Break

**Bicycle
Safety
Enforcement**

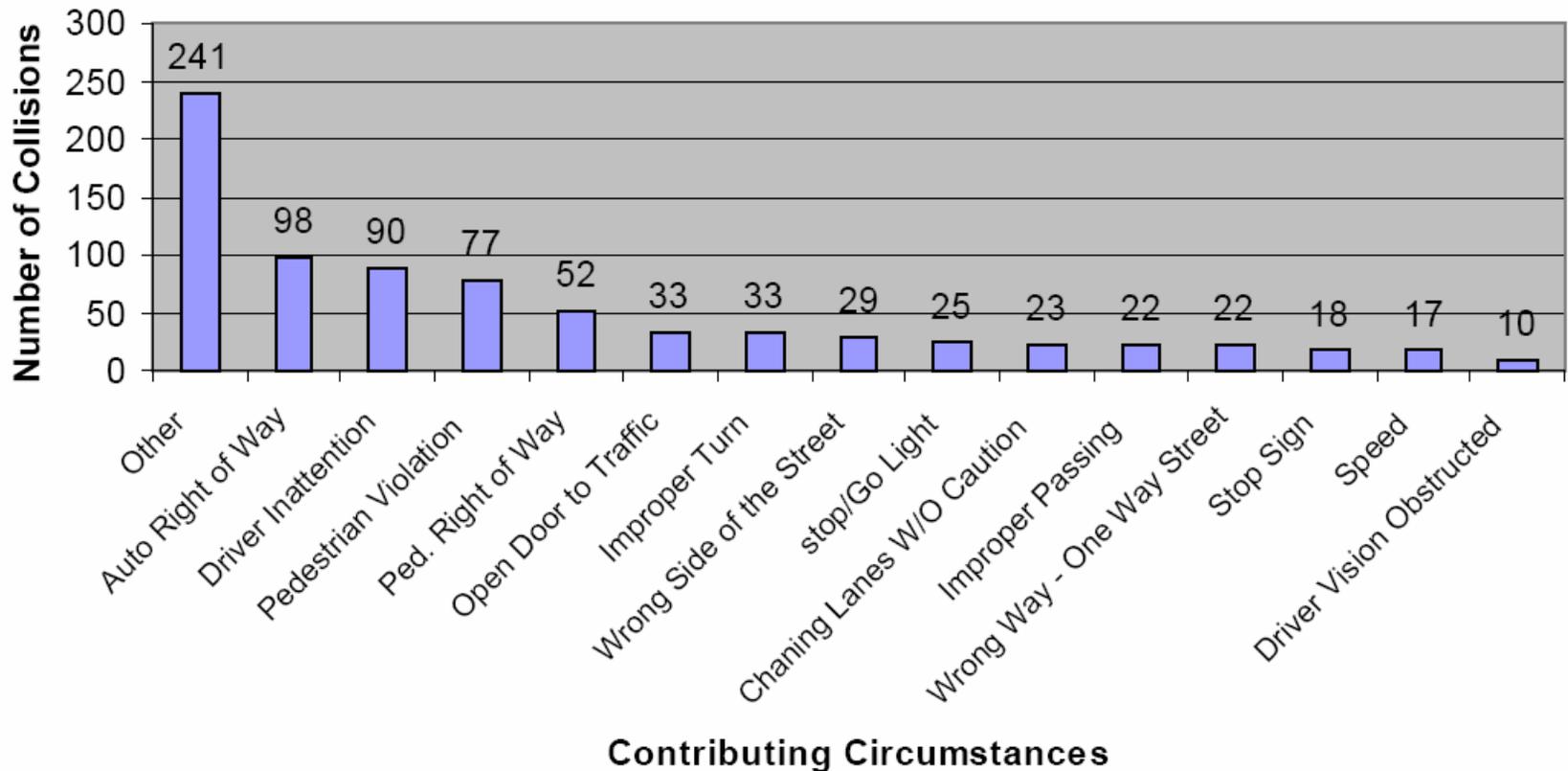
Bicyclist Crash Types

Predominant Bicycle Collision Type: 1997-1999

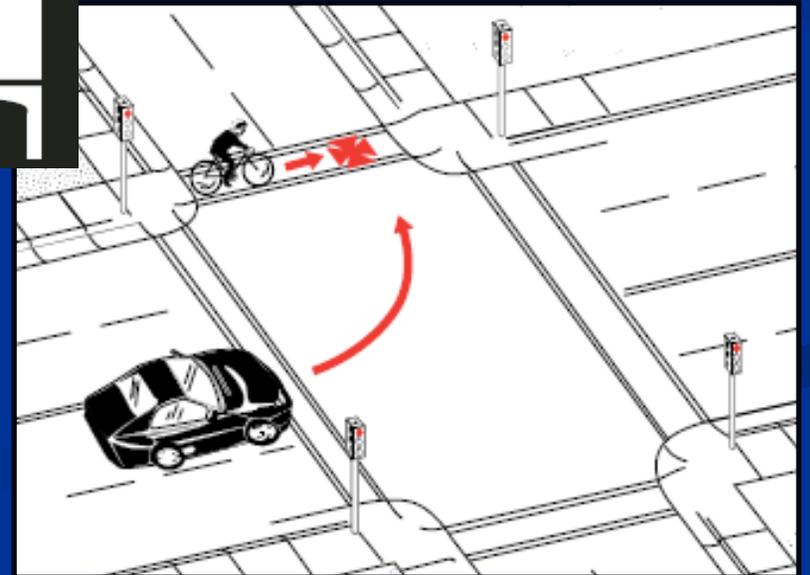
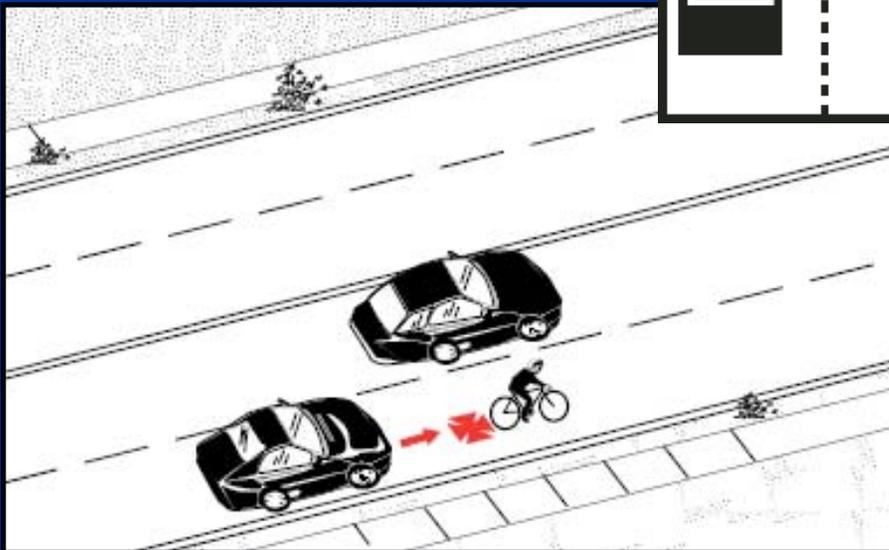
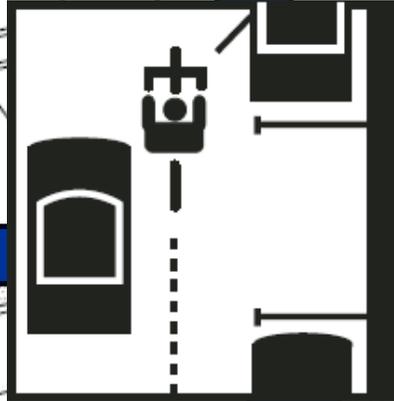
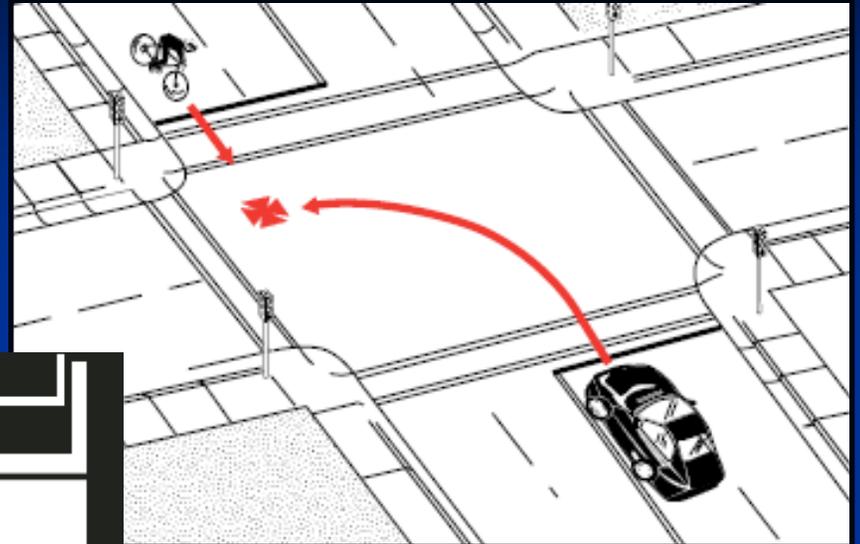
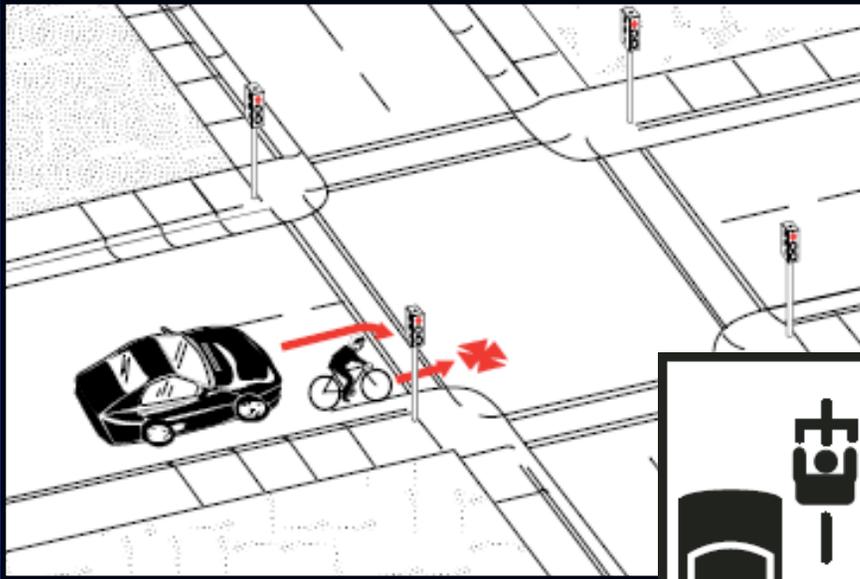


Bicyclist Crash Contributing Circumstances

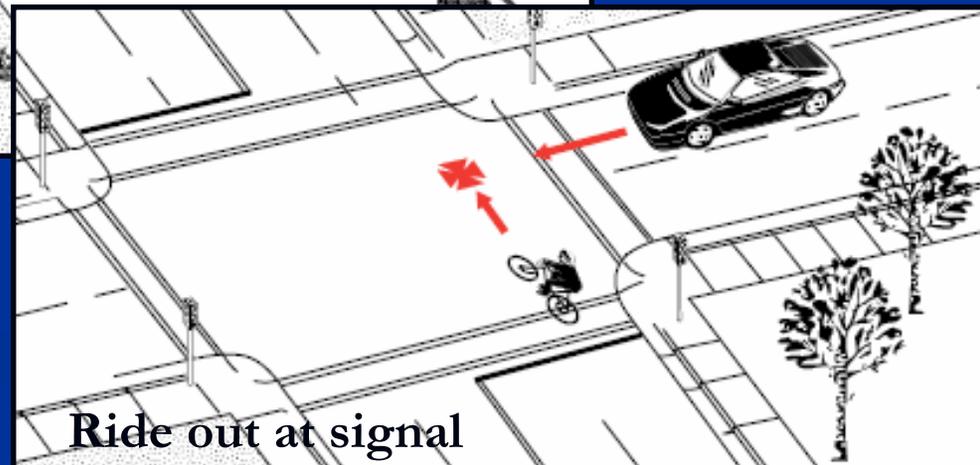
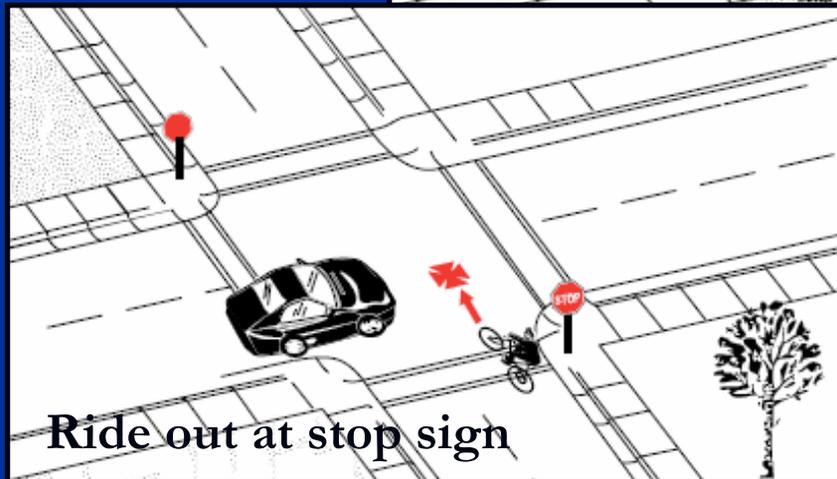
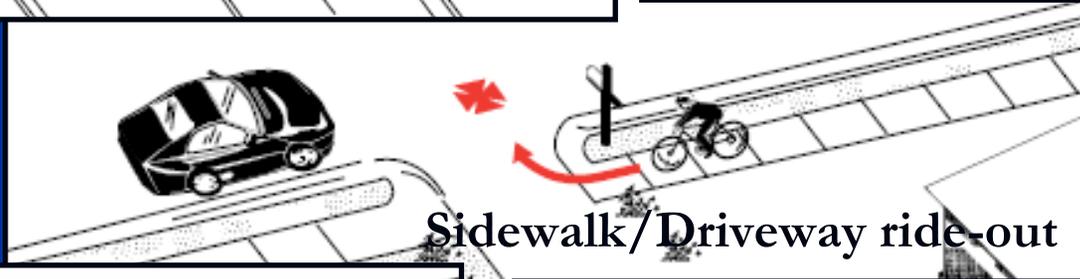
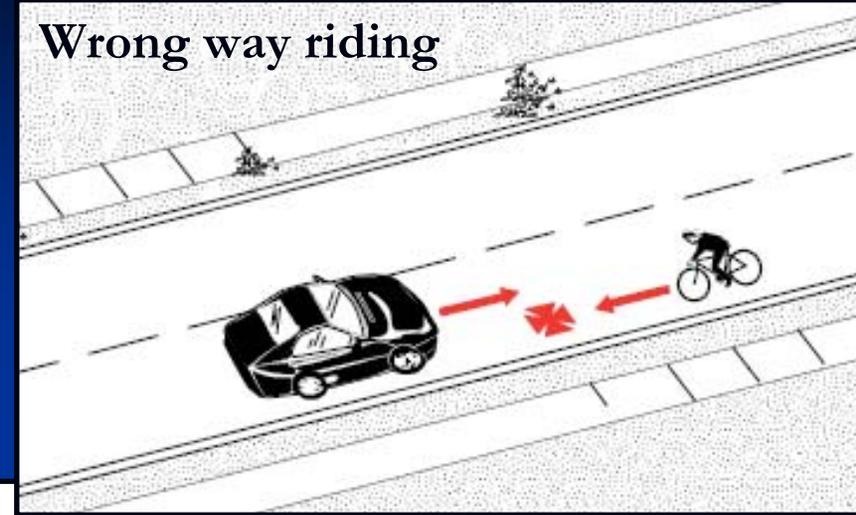
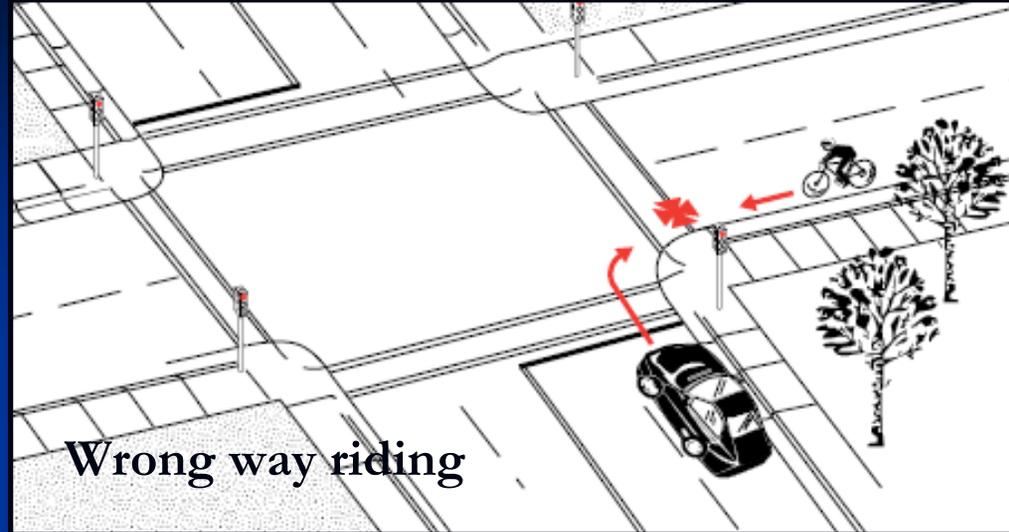
Predominant Contributing Circumstances (1997-1999)



Frequent Motorist At-Fault Crash Types:



Frequent Cyclist At-Fault Crash Types:



DC Bike Laws

■ DCMR 1201.2. Keeping to the right side of the roadway and exceptions

Any person operating a bicycle upon a roadway at less than the normal speed of traffic shall travel as closely as practicable to the right-hand curb or edge of the roadway. A bicyclist may move away from the right-hand curb under any of the following situations:

- (1) When overtaking and passing another bicycle or other vehicle proceeding in the same direction;
- (2) When preparing for a turn;
- (3) When encountering road hazards, parked vehicles, or a “substandard” lane (11 ft. wide or less)
- (4) When necessary to comply with lane use restrictions; or
- (5) When necessary for the bicyclist's safety.

■ Similarities/Differences with Maryland and Virginia?

DC Splitting Lanes Law :

■ DCMR 1201.3:

(b) A person operating a bicycle may overtake and pass other vehicles on the left or right side, staying in the same lane as the overtaken vehicle, or changing to a different lane, or riding off the roadway, as necessary to pass with safety.

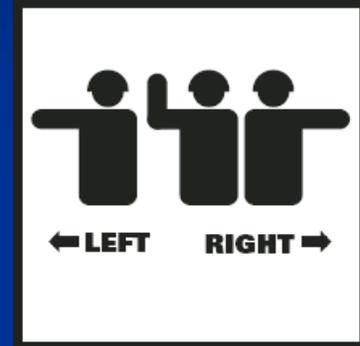
■ MD or VA equivalent?

Target Bicyclist Violations:

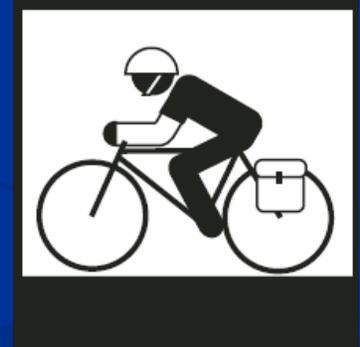
<u>Statute & T-Code</u>	<u>Citation</u>	<u>Description</u>	<u>Fine</u>
1201.2 (a) (T-068)	Failure to ride with traffic (Hazardous riding)	A person operating a bicycle shall comply with subsection 2201.1 of this title requiring drivers to be on the right half of the roadway and shall not operate on the left facing traffic coming from the opposite direction except when authorized by that section.	\$25
1201.14 & 15 (T-072)	Disobeying traffic control device	Every person riding a bicycle on a highway shall be subjects to all the duties applicable to drivers of motor vehicles....	\$25
1201.13 (T-071)	Sidewalk/alley rideout	No bicyclist shall suddenly leave a sidewalk and rid into the path of a vehicle which is so close that it is impossible for the driver to yield.	\$25
1204.2 (T-623)	Headlight and rear reflector required at night	Each bicycle, when in use at night, shall be equipped with a white lamp on the front...visible from at least 500 feet and a red reflector on the rear...(a rear red lamp may be used [1201.3])	\$25
1201.10 (T-609)	Riding on sidewalks prohibited within CBD	There shall be no prohibition against any person riding a bicycle upon a sidewalk within the District, so long as the rider does not create a hazard; provided, that no person shall ride a bicycle upon a sidewalk within the Central Business District....	\$25

Other Bicyclists Violations:

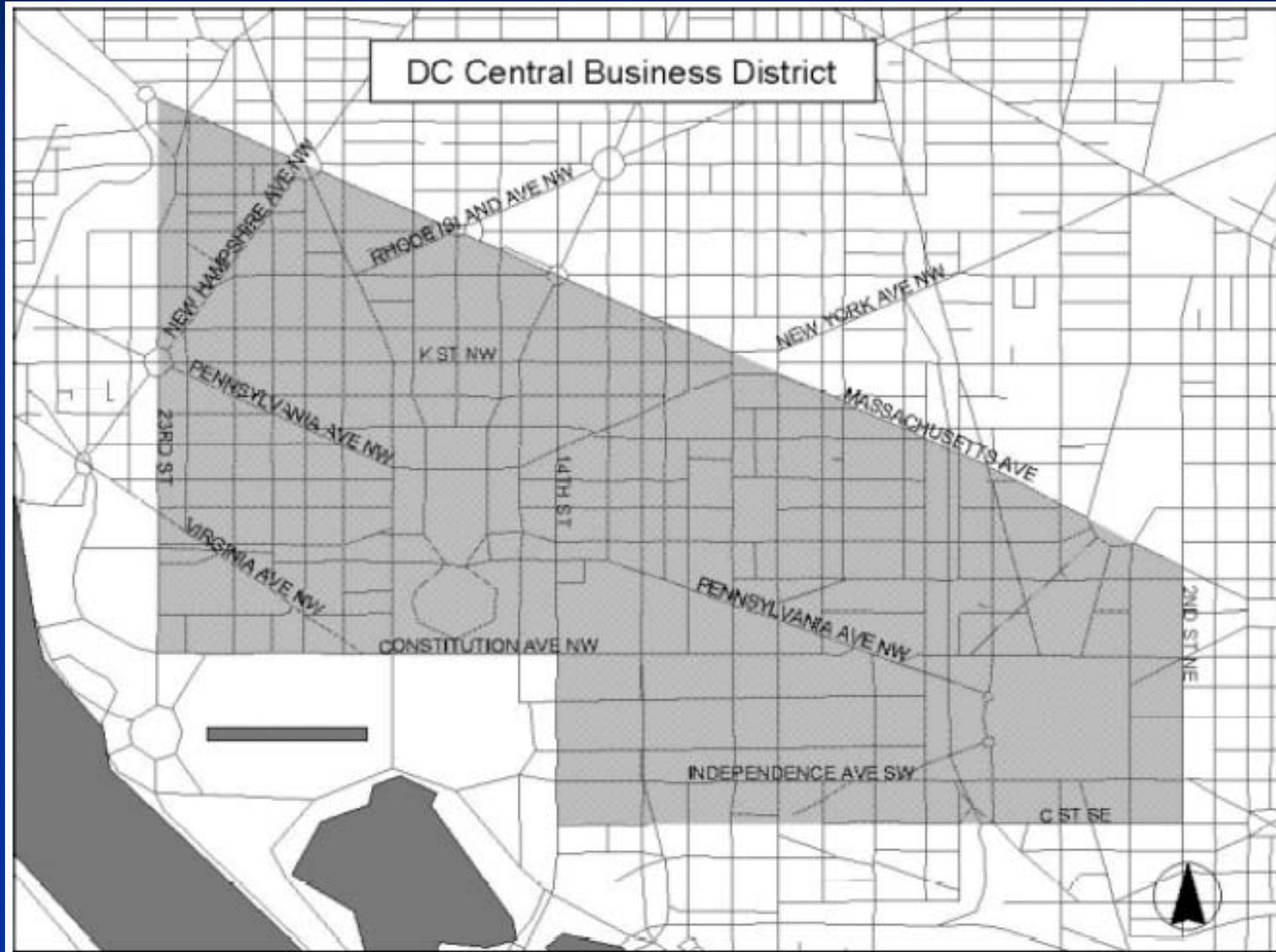
- Failing to signal an abrupt turn



- Children under 16 are required to wear helmets



No Sidewalk Riding in Central Business District



Targeting Bicyclists:

Challenges with enforcement aimed at the bicyclist:

- Cyclists are highly mobile
- Cyclists may not carry identification
- Cyclist may be a child
- Cyclist may be anti-authoritarian
- How to pull over a cyclist

When **NOT** to target bicyclists

- Lack of registration (new DC law).
- Riding on sidewalk **OUTSIDE** the CBD, **UNLESS** there are reckless, endangering pedestrians.
- Splitting lanes.
- No helmet (**UNLESS** they are under 16).
- Hit by door.
- Hit by left or right turning vehicle when cyclist has ROW.

Target Motorist Citations- Bike ROW:

<u>Statute Number</u>	<u>Citation</u>	<u>Description</u>	<u>Fine</u>
2208.2 (T-210)	Failure to yield right of way to vehicle at intersection	The driver of a vehicle intending to turn to the left shall yield right of way to any vehicle approaching from the opposite direction which is so close as to constitute an immediate hazard.	\$25
2214.4 (T-083)	Opening door or permitting door to open on traffic side	No person shall open a door of a vehicle on the side where traffic is approaching unless it can be done without interfering with moving traffic or pedestrians and with safety to himself or herself and passengers.	\$25
2202.2 (T-219)	Passing at a safe distance	The driver of a vehicle overtaking another vehicle proceeding in the same direction shall pass to the left at a <u>safe distance</u> (min. 3'). (New DC 3' passing law pending)	\$25

Safe Passing Distance:



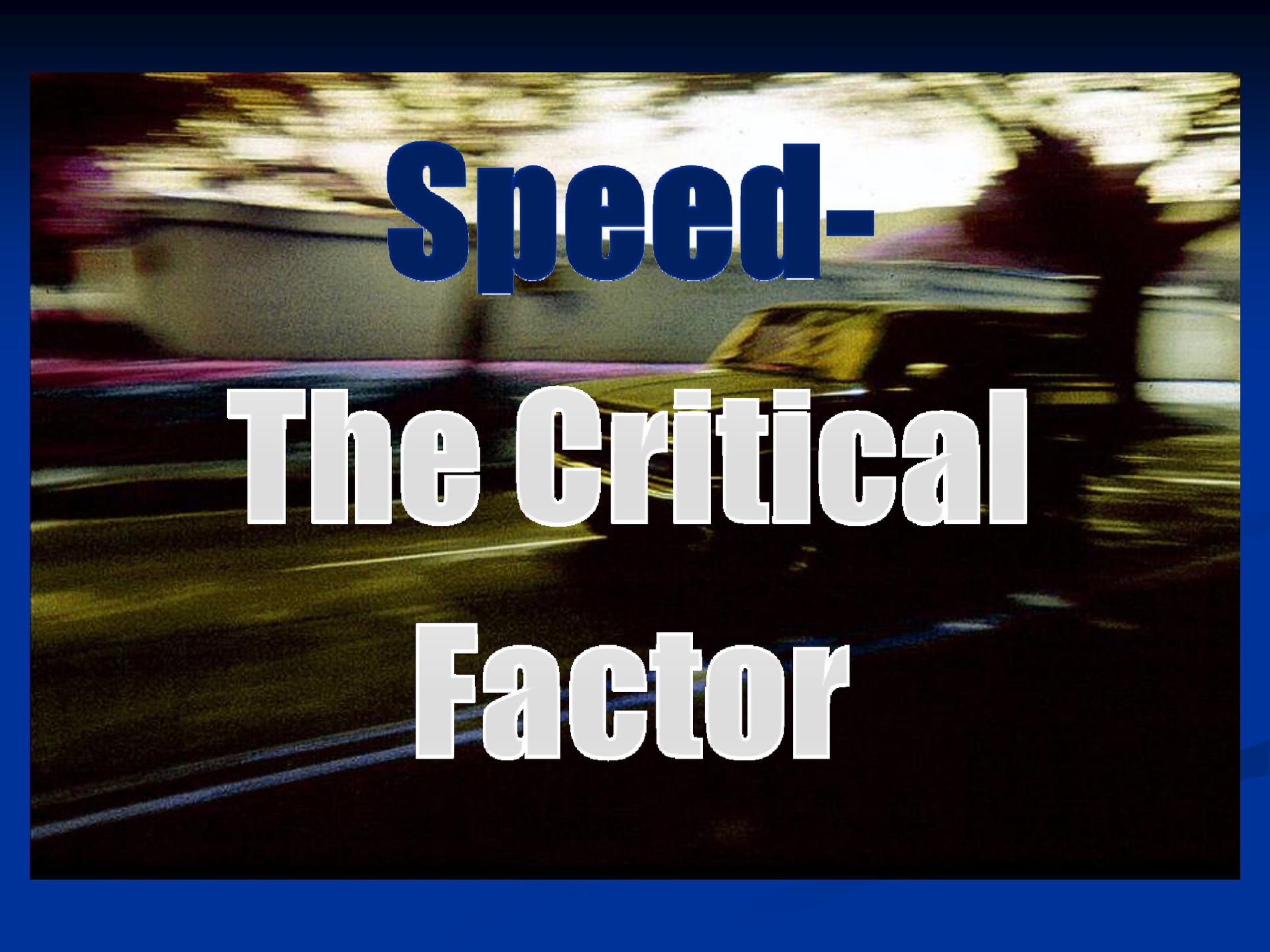
Where to Ride if No Bike Lane



Other Areas of Focus for Enforcement on the Motorist:

- Speeding, particularly in neighborhoods with high levels of pedestrian and bicycle traffic and near schools.
- Driving while impaired by drugs or alcohol.
- Aggressive and reckless driving.





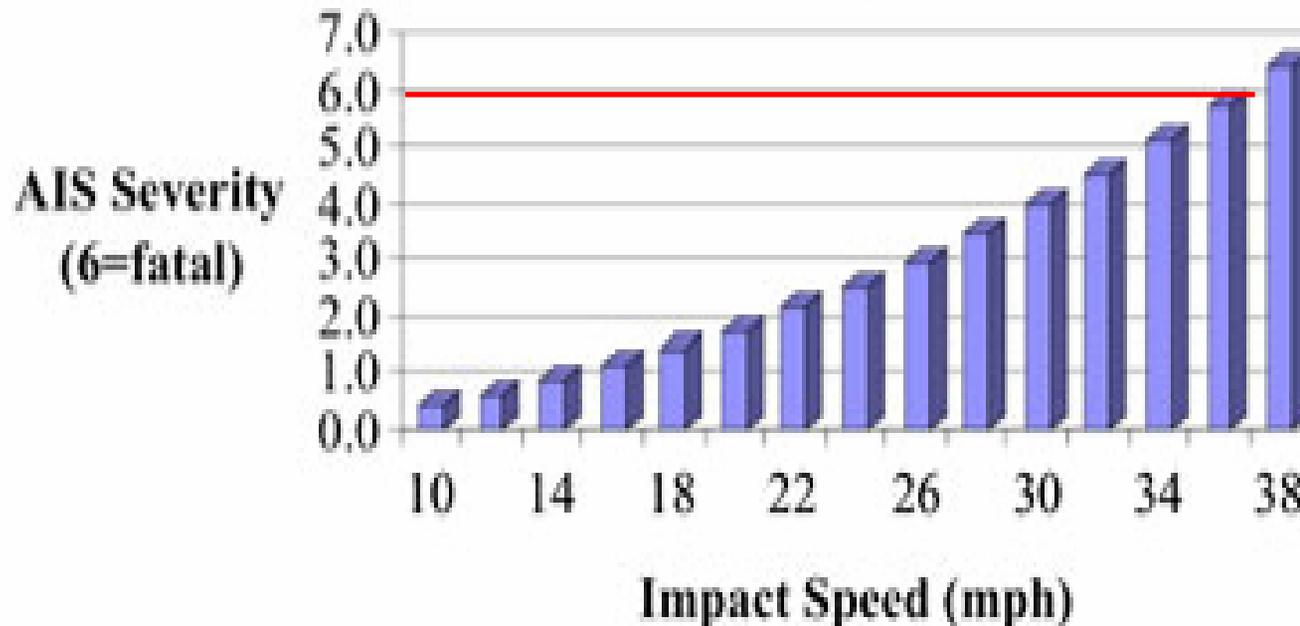
Speed-

The Critical

Factor

Speed & Injury Severity:

Impact Speed vs. Pedestrian Injury (impact only)



Speed Enforcement is Key!



**Hit
at
40mph**

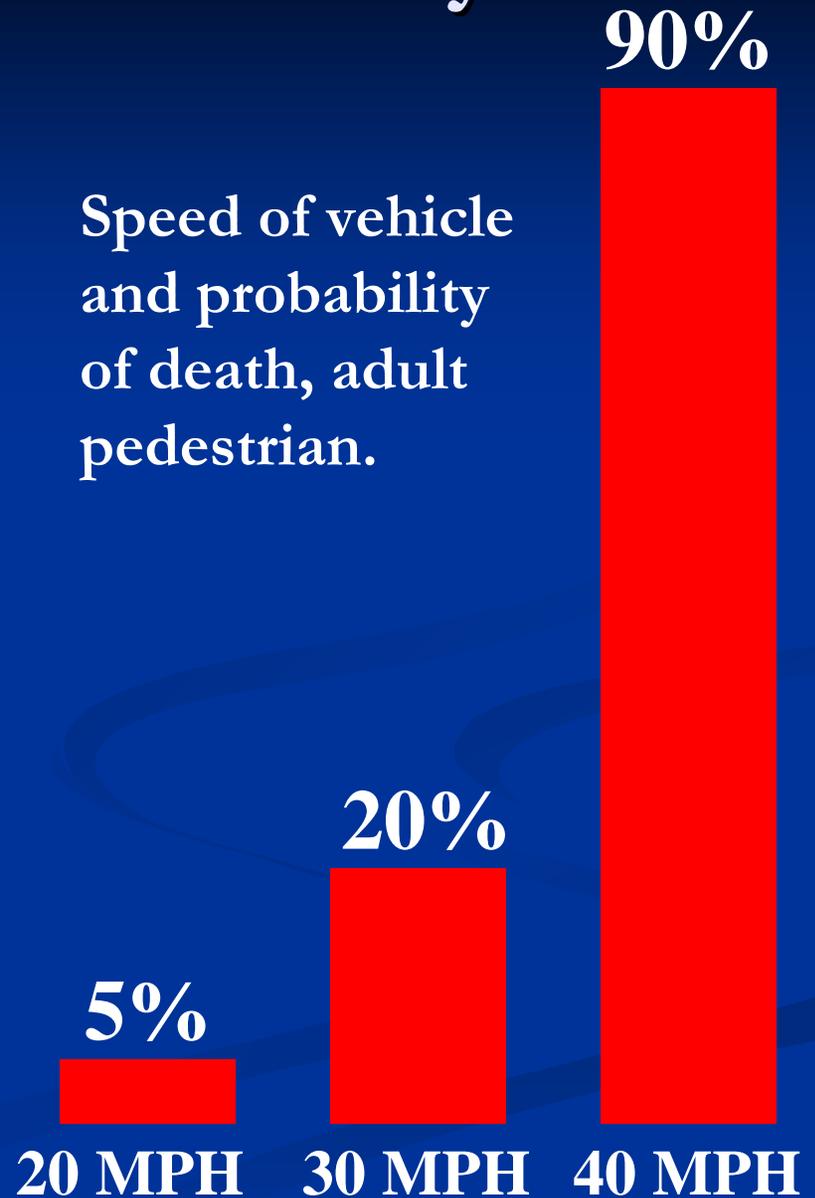
There is an
80% chance
I'll die.

**Hit
at
30mph**

There is an
80% chance
I'll live.

It's **30** for a reason.

Speed of vehicle
and probability
of death, adult
pedestrian.



British Think! Media Campaign



**At 5mph over the 30mph limit,
how much further does it take to stop?**



Driver Focus at Different Speeds



Driver focus at 40 mph



Driver focus at 30 mph



Driver focus at 20 mph



Driver focus at 15 mph

Target Motorist Citations- Speed:

<u>Statute T-Code</u>	<u>Citation</u>	<u>Description</u>	<u>Fine</u>
2200.4 (T-335)	Failure to control speed	In every event speed shall be controlled as may be necessary to avoid colliding with any person, vehicle, or other conveyance on or entering the street or highway in compliance with legal requirements and the duty of all persons to use DUE CARE.	\$50
2200.5 (T-057)	Failure to slow for intersection	The driver of every vehicle shall drive at an appropriate reduced speed when special hazards exist with respect to pedestrians, road or weather conditions.	\$50
2300.2 (T-585)	Failure to use due care to avoid colliding with pedestrian	Every driver of a vehicle shall: <ul style="list-style-type: none"> ■ exercise <u>due care</u> to avoid colliding with any pedestrian upon any roadway; ■ give warning by sounding the horn when necessary; and ■ exercise proper precaution upon observing any child or any confused or incapacitated person upon the roadway. 	\$50

Street Smart Enforcement 2008

- Spring 2008 Campaign begins March 7th.
- Media events to engage the public
- Target high crash corridors and intersections
- Enforcement resources
- Educational resources

The logo for Street Smart is displayed on a red rectangular background. The word "STREET" is written in white, uppercase, sans-serif font. Below it, the word "SMART" is written in a larger, bold, yellow, italicized, sans-serif font. To the left of "SMART" are three vertical white bars of varying heights. Below the main text, the tagline "Think of the Impact You Can Make" is written in a smaller, white, italicized, sans-serif font.

STREET
/// SMART
Think of the Impact You Can Make

Street Smart Enforcement 2006

- Over 4000 total citations
 - 60% to drivers
 - 40% to pedestrians
 - 118 citations to cyclists





2008 DC Enforcement Wave



■ Pedestrian High Crash Intersections/Locations (2003-2005)

Rank	# of Crashes	Location	Quad
1	9	Benning Rd. and Minnesota Ave.	NE
2	6	7 th St. and Pennsylvania Ave.	NW
3	6	12 th St. and Pennsylvania Ave.	NW
4	6	Bladensburg Rd. and New York Ave.	NE
5	6	North Capitol St. and Florida Ave.	NW/NE
6	6	North Capitol St. and Massachusetts Ave.	NW/NE
7	6	Mississippi Ave. and Wheeler Rd.	SE
8	6	Alabama Ave. and Stanton Rd.	SE
9	6	Florida Ave. and Georgia Ave.	NW
10	5	18 th Street and Columbia Rd.	NW
11	5	South Capitol St. and Southern Ave.	SE/SW
12	5	Chesapeake St. and Southern Ave.	SE
13	5	4 th St. and Rhode Island Ave.	NE
14	4	5 th and H St.	NW
15	4	17 th and K St.	NW
16	4	16 th and Lamont St.	NW
17	4	14 th and Spring Rd.	NW
18	4	Connecticut Ave. and Macomb St.	NW
19	4	Connecticut Ave. and Porter St.	NW
20	4	South Capitol and M St.	SE/SW

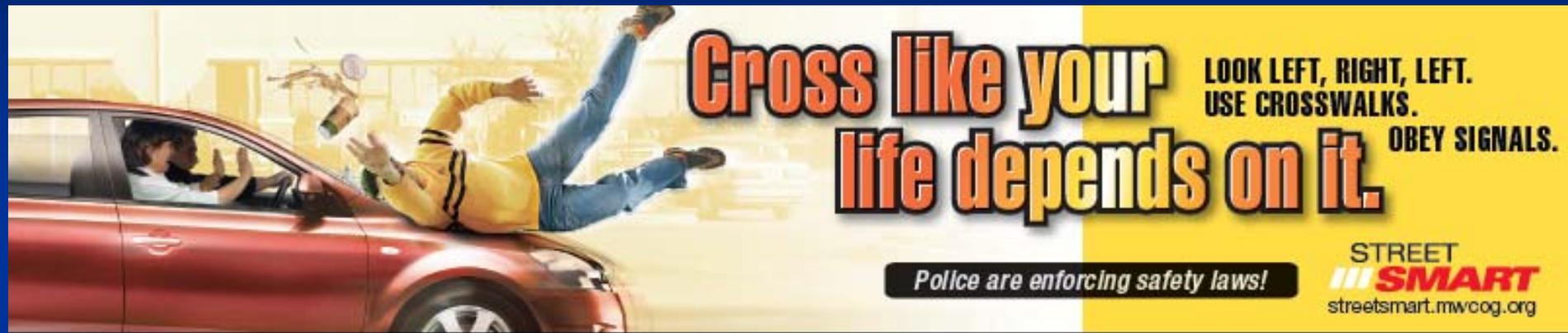
2008 DC Enforcement Wave

■ Pedestrian High Crash Corridors

- Georgia Avenue, NW
- 14th Street, NW, in Ward 1
- H Street- Benning Road, NE
- Bladensburg Road, NE (speeding)
- Southern Avenue, SE (speeding)
- Wisconsin Avenue, NW at the commercial nodes
- Connecticut Avenue, NW at the commercial nodes

Education to Back Up Enforcement

STREET SMART Media Campaign, 2008:



■ Radio Ad: “Drive like THEIR life depends on it”



- Conducted since 2002
- Washington and Baltimore metro areas
- Funded by highway safety grant funds (DC, MD, VA)
- Targets pedestrians, drivers and cyclists
- English and Spanish
- As of 2007, fall and spring campaigns



Educating Pedestrians

- Street Smart educational handouts.

SAFETY TIPS

For Drivers, Pedestrians, and Bicyclists

FOR DRIVERS:



- /// Stop for pedestrians at crosswalks.



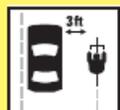
- /// Slow down and obey the posted speed limit.



- /// Look before opening your door.



- /// Be careful when passing stopped vehicles.



- /// Allow 3 feet when passing bicyclists.

STREET
SMART

A public safety program of the
District of Columbia, Maryland and Virginia.

FOR PEDESTRIANS:



- /// Cross the street at marked crosswalks and intersections.



- /// Before crossing, look left, right, then left again.



- /// Use pedestrian pushbuttons.



- /// Begin crossing the street on "Walk" signal.



- /// Stay visible after dark and in bad weather.



- /// Watch out for trucks and buses backing out of parking spaces and driveways.

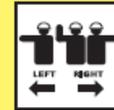
FOR BICYCLISTS:



- /// Obey all regulatory signs and traffic lights.



- /// Never ride against traffic. Ride with traffic to avoid potential accidents.



- /// Use hand signals to tell motorists what you intend to do.



- /// Ride in a straight line to the right of traffic and about a car door width away from parked cars.



- /// Always wear a helmet. Helmets dramatically reduce the risk of head injury in a bicycle accident.



- /// Use lights at night and when visibility is poor.

PEDESTRIANS and CYCLISTS should WATCH for TURNING vehicles.
MOTORISTS MUST YIELD to CYCLISTS and PEDESTRIANS when TURNING.

Enforcement Resources

■ Crosswalk Law Card for Motorists

*** District of Columbia ***
Pedestrian Safety for Drivers

A. At crosswalks and intersections without signals:

- The driver of a vehicle shall **stop** and give the right-of-way to a pedestrian crossing the roadway within a marked crosswalk or unmarked crosswalk at an intersection.

DC Code §60-2201.28(a) (2005)

PENALTY: \$50 and two points
Up to \$500 and/or up to 30 days in jail

B. At intersections with signals:

- When proceeding on a green signal, drivers turning right or left shall yield the right-of-way to pedestrians lawfully within the crosswalk.
- When turning right on red after stopping, drivers shall yield the right of way to pedestrians lawfully within the crosswalk.

1. 18 DCMR §2103.3(b) (1995)

2. 18 DCMR §2103.8(c) (1995)

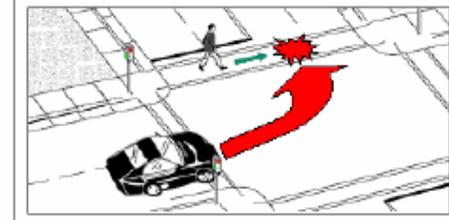
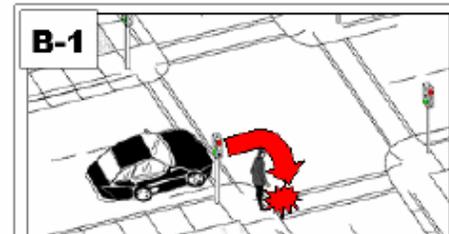
PENALTY: \$50 and two points



District Department of Transportation

Metropolitan Police Department
www.mpd.dc.gov
District of Columbia
Department of Transportation
Telephone: (202) 671-2730
www.ddot.dc.gov

*** District of Columbia ***
Pedestrian Safety for Drivers



See reverse side for explanation of laws



2009 Enforcement Wave



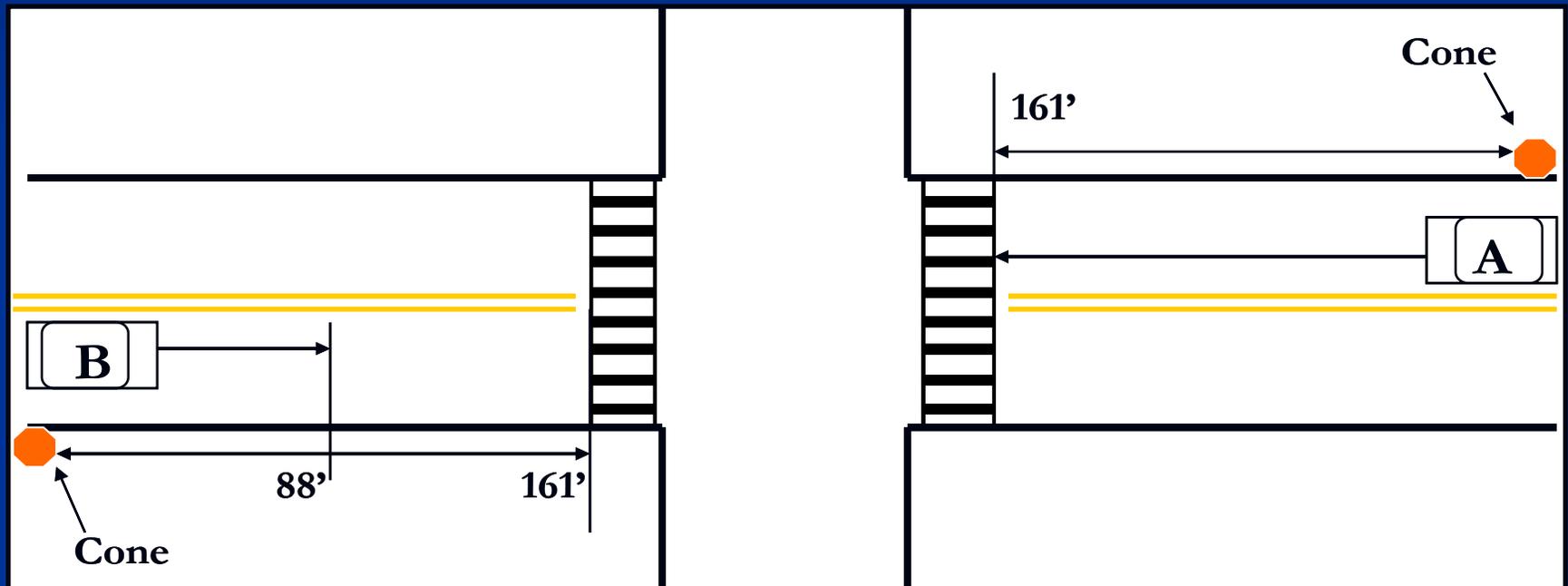
Key Points for Street Smart Enforcement, 2009:

- Enforce fairly among the three user groups.
- Concentrate on high-crash corridors/intersections.
- We must write citations to show we are serious, but verbal warnings are OK too.
- Officers should be on foot and/or bicycle in teams of two-four (motorcycles work too).

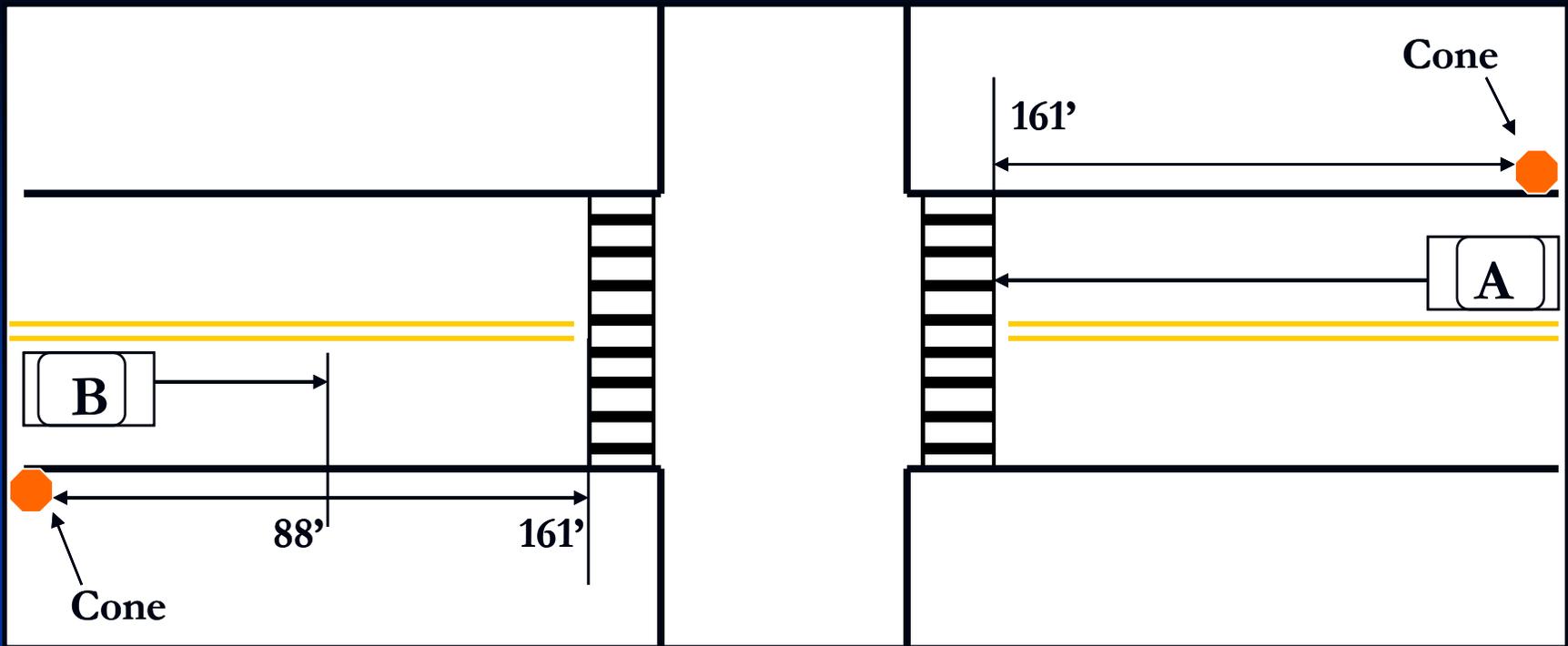
Effective Enforcement Techniques

Setting up a Targeted Crosswalk Enforcement Detail

(aka “Crosswalk Sting”)



Set up example: A traffic cone is placed along the edge of the roadway. It is measured out to the safe stopping distance of a vehicle traveling at **10 mph over** the posted speed limit. In this case the, posted speed limit is 25 mph, so the safe stopping distance for car “A” traveling at 35 mph and a 2 second reaction time is 161’.

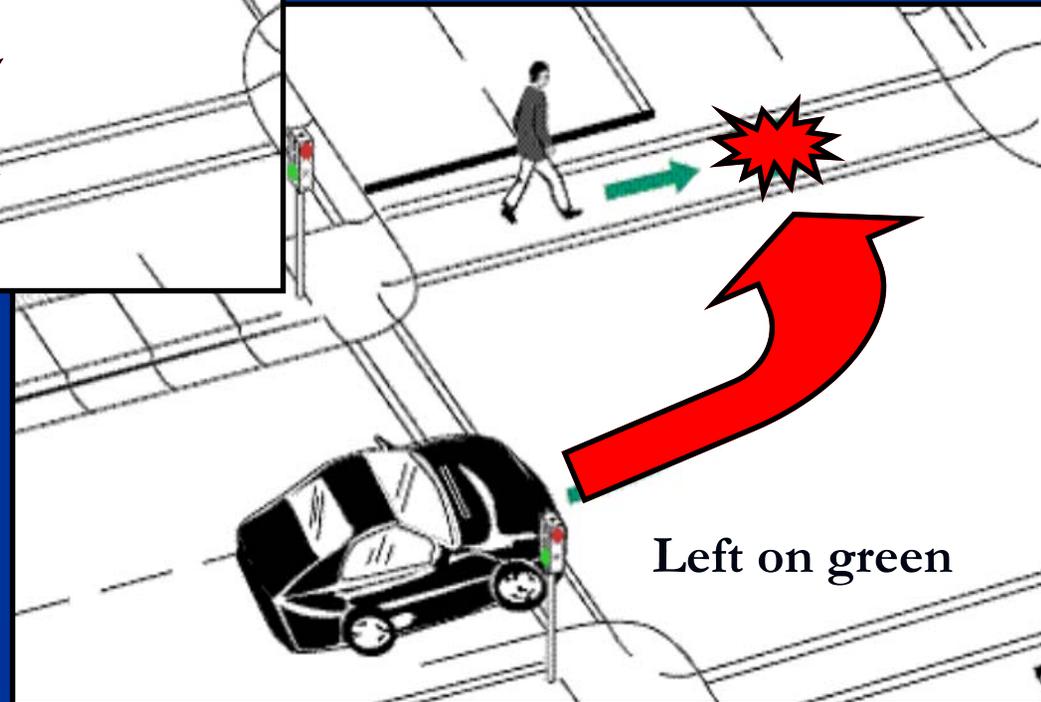
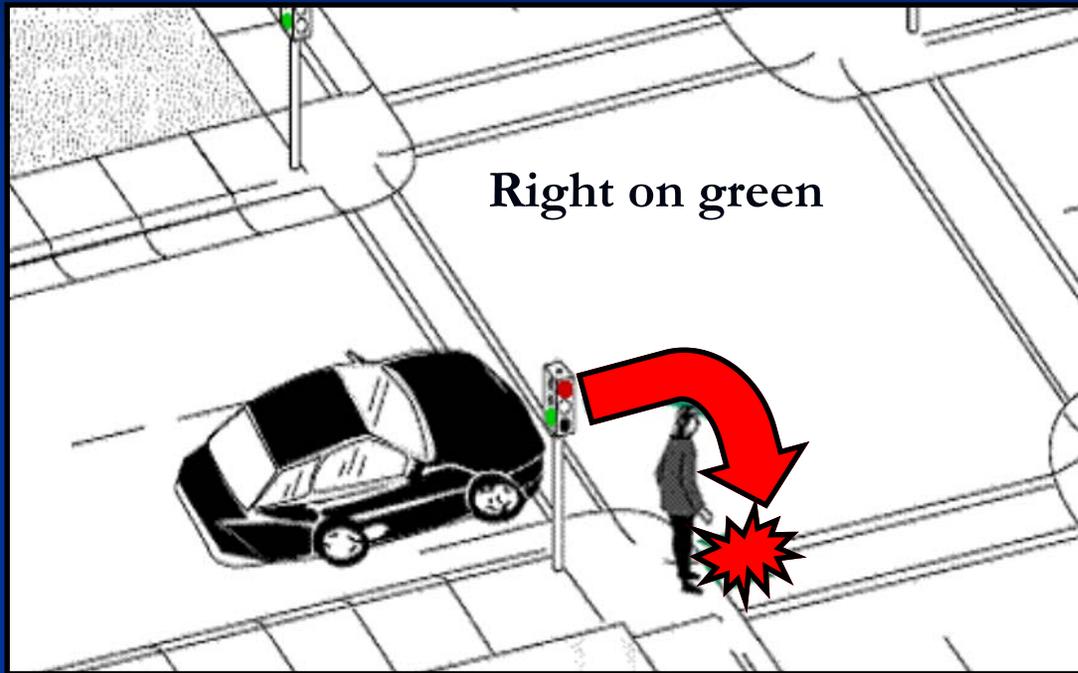


- The pedestrian (decoy officer) enters the crosswalk as the vehicle approaches the cone, **but before** the vehicle has entered the shaded area. If the vehicle does not stop and yield to the pedestrian, the driver will be cited.
- As you can see in the example, if car “B” is traveling at the posted speed and with a **normal reaction time of 1.6 seconds**, the driver would be able to safely stop in 88’, leaving a safe distance of 73’ to the crosswalk.

How to Target Motorists at Signalized Intersections:

Intersections:

- Locate officers downstream of violation location



Street Smart Enforcement 2006

- MPD in Action:



Officer Page already on the Job



- Feb. 4, 2008: Pulling over cab for failing to give pedestrians ROW while turning right on green.

Fair Game Rules:

- Drivers, cyclists, and pedestrians all have duties and responsibilities.
- Traffic officers are like referees in a basketball game:
 - Lax enforcement (what we have now) leads to chaos.
 - Strict enforcement of every detail of every rule is unworkable and will lead to backlash and ultimately failure.
- Establish “Fair Game” rules for each user group.
 - The priority is to protect vulnerable road users without unreasonably restricting the mobility any group.



Targeting Pedestrians:

- It's more than jaywalking!
- The Seattle Police Department vigorously enforced the anti-jaywalking laws for 50 years, issuing more than 500,000 citations. Seattle's pedestrian crash experience was little different from the rest of the USA where little or no attention was paid to this problem.
- Jaywalking enforcement is often episodic and inconsistent but is usually seen as a waste of police manpower.
- *Police officers should ask themselves "why do I expect pedestrians to go to a crosswalk? Do drivers behave differently there?" If the crosswalk is made more attractive, pedestrians might find value in going to them.*

Effective Use of Enforcement?



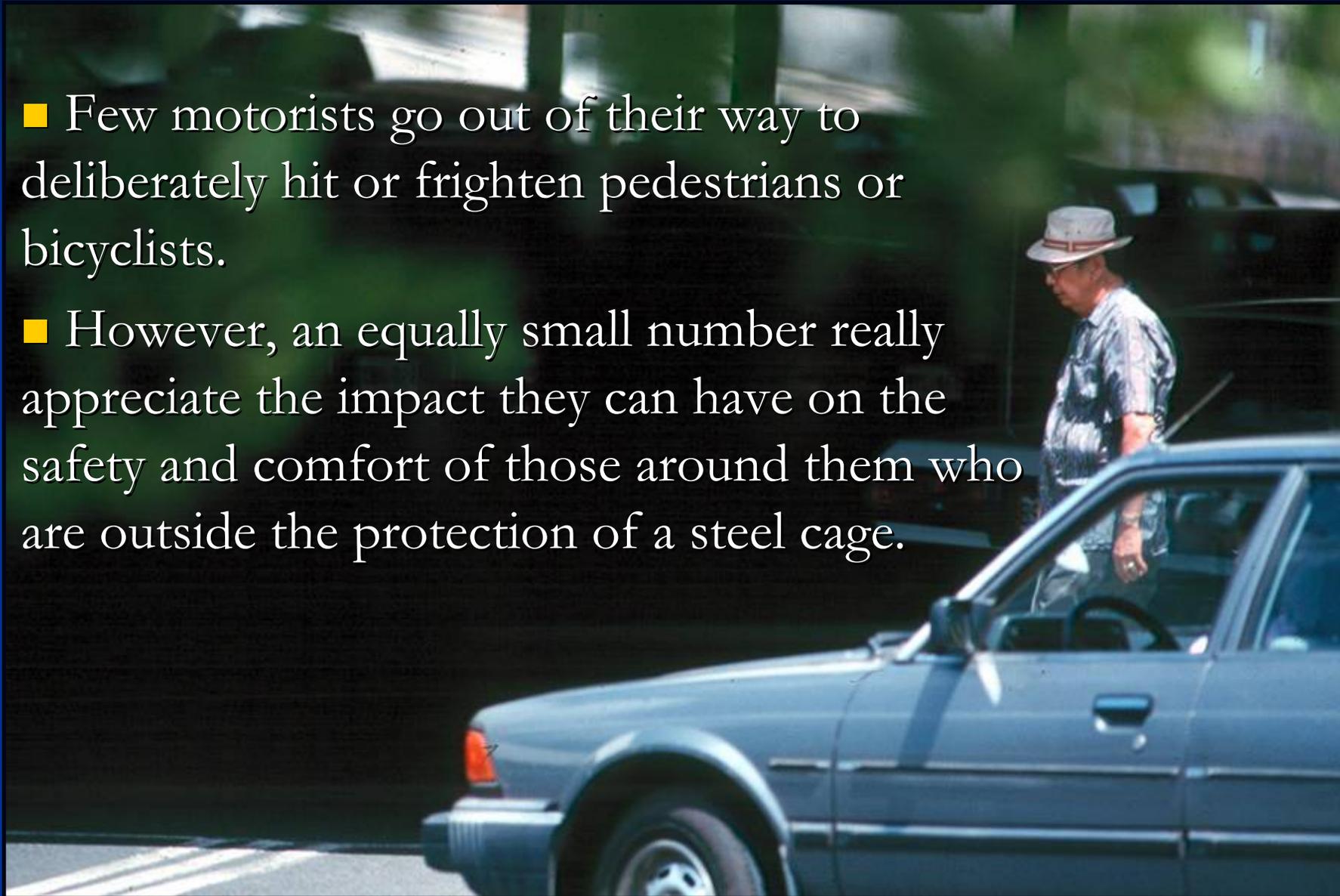
Jaywalking Enforcement, Seattle, 2003.

Fair Game Rules for Targeting Pedestrians :

- While it is illegal to begin crossing on a flashing “Don’t Walk” signal, the main safety goal is to get pedestrians out of the crosswalk before the light changes (countdown ped signals help):
 - Ticket only if they remain in the crosswalk when signal changes.
- Crossing against the signal when no cars are approaching:
 - Officer discretion, verbal warning or ticket.
- Mid-block crossings:
 - If between signals or not, if pedestrians are vigilant, scanning, waiting, not stepping into traffic, no action need be taken.
- Pedestrians who are drunk (take to a place of safety).
- Dealing with a pedestrian’s identification.

Targeting Motorists:

- Few motorists go out of their way to deliberately hit or frighten pedestrians or bicyclists.
- However, an equally small number really appreciate the impact they can have on the safety and comfort of those around them who are outside the protection of a steel cage.

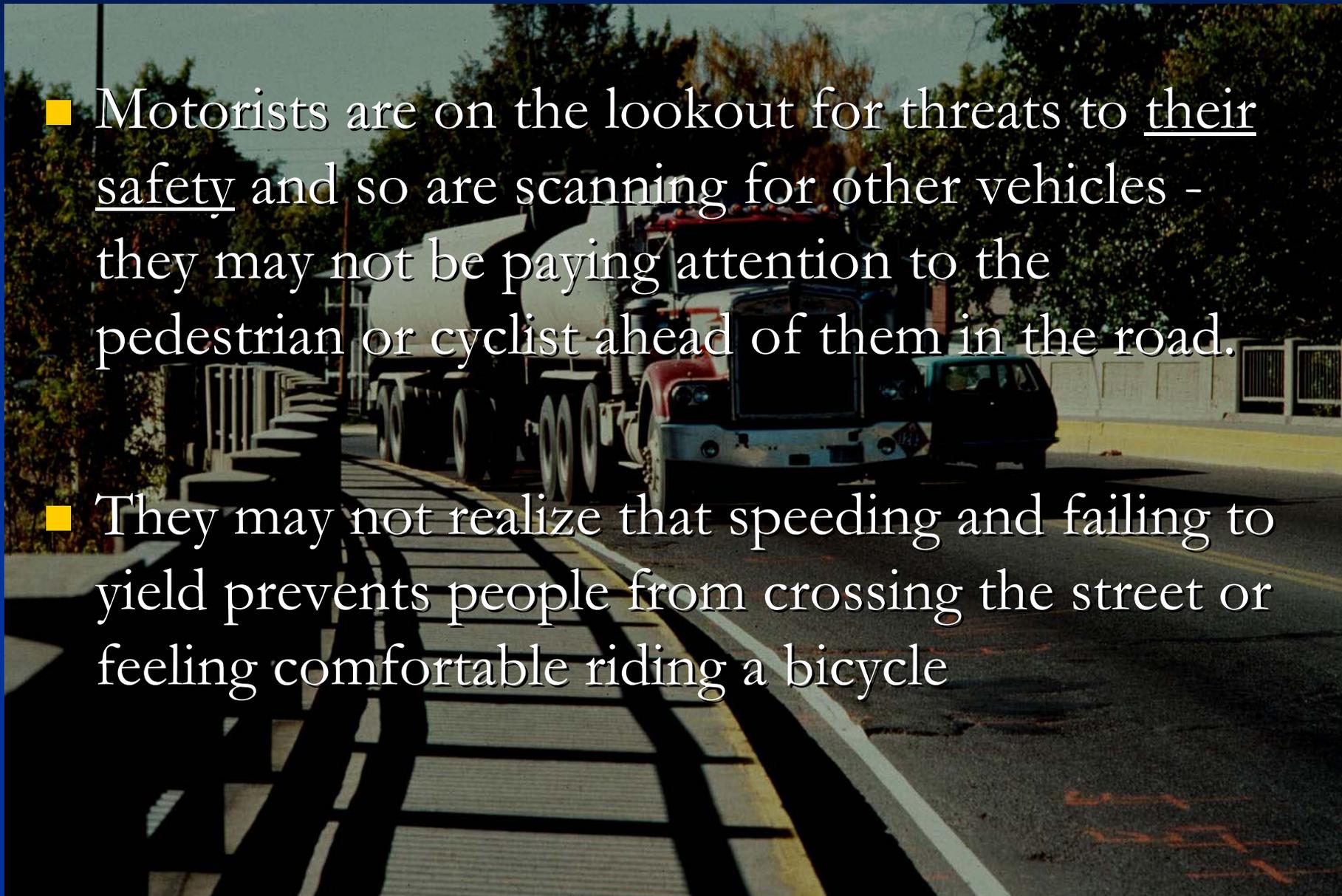


Special Considerations for Children



Targeting Motorists:

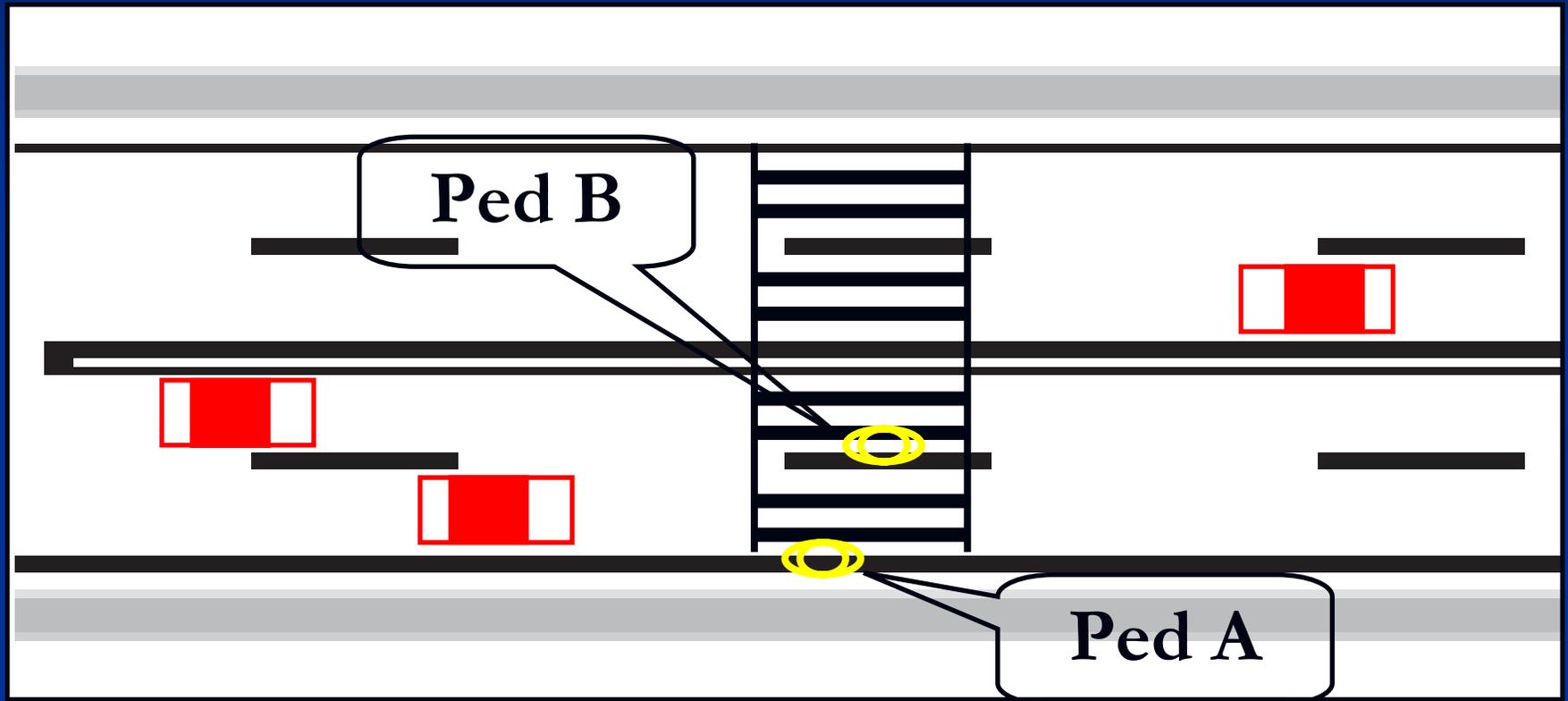
- Motorists are on the lookout for threats to their safety and so are scanning for other vehicles - they may not be paying attention to the pedestrian or cyclist ahead of them in the road.
- They may not realize that speeding and failing to yield prevents people from crossing the street or feeling comfortable riding a bicycle



Fair Game Rules for Targeting Motorist:

- At unsignalized crosswalks, the law requires a driver in any lane to stop when a ped is in any lane. Use “half of roadway” rule (like MD).
 - Drivers should stop when a pedestrian is on their half of the roadway or when approaching within one lane of their half of the roadway.
- At signalized crosswalks, a left or right turning vehicle should provide one lane width of safety margin.

Half of Roadway Rule



For Ped A, drivers on the pedestrians half of the street must stop.

For Ped B, drivers on the pedestrians half of the street must stop AND drivers on the other half of the street must stop (ped is within one lane of the other half of the roadway).

Discussion:

- Enforcement Experience from other jurisdiction?
 - Successes?
 - Challenges?
- Other Questions?
 - Will this work for your jurisdiction?
- Thank you!